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Railway Freight Charges

THE Minister of Transport, Mr. J. S. Maclay, was considering, as we went to press, the advice of the Permanent Members of the Transport Tribunal, which he is obliged to seek before making his decision on the application by the British Transport Commission under Section 82 of the Transport Act for an increase in railway charges. The immediate cause of the application was the recent award by the Railway Staff National Tribunal of wage increases to railwaymen, back-dated to November, which in a full year would add £14,200,000 to railway outgoings; this sum, the Railway Executive has pointed out, cannot be obtained by further economies—although economies are the object of constant study and are put into operation wherever possible. The Minister has stated that he has been asked to authorise to raise freight charges by 10 per cent., subject to a maximum increase of 10s. a ton, charges for "smalls" by 20 per cent., those for returned empties by 50 per cent., and dock and canal charges by 10 per cent. No details are available as to precisely what additional revenue granting of the application would produce, but in the light of recorded revenue from the different types of traffic the figure might be very roughly £25 million in a full year, or rather more than what it was hoped to obtain from the flat 10 per cent. increase in railway freight and parcels and dock and canal rates which took effect last April. As prices have been rising for many months

past, and in view of the time-lag between price increases and authority for the B.T.C. to raise charges, apart from wage increases, it is impossible to assess the effect of any increase in charges on the Commission's balance sheet for the current year. Some weeks ago, it seemed that the April freight rate increases and the fare increases envisaged in the 1951 Passenger Charges Scheme—which latter, however, is unlikely to be put into effect until well into 1952, even if it is not modified by the Transport Tribunal—would go far to reduce the deficit for 1951 to some £10 million. It seems now, however, that increased costs will more than offset any increases granted in freight or passenger charges, so that the deficit might be £15 million. The impending increase, if authorised, will be the third rise in freight charges in some eighteen months, and will bring railway freight rates to some 220 per cent. of the pre-war level.

I.L.O. Inland Transport Committee

THE interest that is being taken in this country in the International Labour Office is shown by the strength of the British delegation to the Fourth Session of the I.L.O. Inland Transport Committee in Genoa, which began last Tuesday and lasts some ten days. The Government is represented by Messrs. A. W. Clarke and A. M. Morgan, of the Ministries respectively of Transport and of Labour & National Service, transport employers by Messrs. Frank Gilbert, Principal Staff Officer of the British Transport Commission, and D. F. Macdonald, General Manager of the National Association of Port Employers, and the transport element in the British trades unions by Messrs. J. B. Figgins, General Secretary of the National Union of Railwaymen, and Francis Coyle, National Secretary of the Passenger Service Group of the Transport & General Workers' Union. The I.L.O. Inland Transport Committee is the only international official body dealing with labour questions affecting railways; these are not handled by the International Union of Railways, and the recommendations of the International Railway Congress Association, of which the General Section embraces labour questions *inter alia*, are not binding on members. The agenda includes labour questions affecting transport co-ordination, and conditions of employment of drivers of motor vehicles in international passenger and goods transport—an indication of the growth of these traffics.

G.N.R.(I.) Stockholders Agree to Sell

THE stockholders of the Great Northern Railway (Ireland) have voted by ballot to part with the system to the Governments of the Republic and Northern Ireland for £4,500,000, the maximum price which the Governments were prepared to entertain. The issue of a compulsory acquisition has thus been avoided and the stockholders have agreed on a distribution of the amount on terms, quoted in an editorial note in our November 16 issue, which were circulated to them in the ballot papers. The final figures were not received until last Monday, but those which had been received by the weekend showed a majority of almost 60 per cent. in favour of acceptance among all classes of stockholders. The next move after the final figures have been conveyed to the two Governments will be to draft legislation enabling the purchase price to be paid and the assets of the company to be taken over. The Northern Ireland House of Commons was due to debate on Wednesday a motion relating to the agreement for the joint acquisition of the railway. As indicated in our November 2 issue, the Governments propose to set up a joint board on which both C.I.E. and the U.T.A. will be equally represented, to take over all but the fixed assets—which would become State property—and operate the rail and bus services within the Republic and Northern Ireland respectively.

Irish Wage Increases Approved

THE Irish Railway Wages Board has recommended increases in salaries and wages of 4,000 employees of the Great Northern Railway (Ireland) and about 130 of the County Donegal Railways Joint Committee. The

recommendation for the G.N.R.(I.) is that the basic rates for salaried staffs and conciliation grades should be increased; those whose home stations are in the Republic are to receive the same present rates as similar grades in C.I.E. and those with home stations in Northern Ireland the same rate as has been agreed for workers of similar grades within the Ulster Transport Authority—these are in effect an increase of 6 per cent. and 8 per cent. The County Donegal Railways staff in Northern Ireland should be paid the same rates as the U.T.A., less 10 per cent., and that in the Republic, C.I.E. rates, less 10 per cent. The Board decided to make no recommendation for Dundalk, Newry & Greenore Railway staff. The Transport Salaried Staffs Association had asked for an increase of 15 per cent. for clerical staff, and the N.U.R. for an advance of 15s. a week, with the proviso that no male employee should be paid less than £5 a week. The Irish Railwaymen's Union sought increases to ensure that all adult employees would receive a minimum of £5 a week; and the Associated Society of Locomotive Engineers & Firemen a 10 per cent. increase.

Mr. W. H. Powell

THE death of Mr. W. H. Powell, recorded elsewhere in this issue, has removed a man who was well known in administrative circles on the railways and in the signal and brake industry, for many years. Mr. Powell, who had an intimate knowledge of railway signalling affairs, was trained in mechanical engineering on the Taff Vale Railway, of which his father was Signal Superintendent. He later entered the service of the well-known concern, McKenzie & Holland Limited, for which his father also had worked, and he was associated with a number of its contracts. At one time, Mr. Powell was especially concerned with the former North Eastern Railway, where McKenzie & Holland were regularly engaged, and dealt with outdoor work for several important installations. He was best known, however, in connection with management functions in the signalling industry, with which he soon was occupied. He became Chairman of the Vacuum Brake Co. Ltd. and of W. R. Sykes Interlocking Signal Co. Ltd. and a Director of the Westinghouse Brake & Signal Co. Ltd. and on these boards as in his other directorships his natural bent for framing business policy and conducting negotiations found much scope and made him a familiar figure to a wide circle, not only of railway engineers, but of commercial men generally.

The Pullman Car Co. Ltd.

WITH the completion of three cars under construction at Brighton by the Pullman Car Co. Ltd., and including the cars for the new "Golden Arrow" which went into service on June 11, the fleet will number 206. During the year the "Queen of Scots" Pullman was withdrawn because of the coal crisis, resulting in a loss in earnings, but despite this the net profit has been increased over the year. The annual report shows that the net profit, after providing for taxes, increased from £61,819 to £62,700 while the trading profit shows a small increase at £172,019 compared with £171,174 last year. Working expenses, in respect of the twelve months ended September 30, 1951, totalled £551,607, compared with £550,588, and gross receipts were £723,626 against £721,762 a year ago. The directors now recommend a final dividend of 6½ per cent., which, with the interim dividend of 4 per cent. already paid, is slightly in excess of that for 1950. From the amount carried forward last year, £92,686, there was deducted the capitalisation of 20 per cent., reducing the amount to £45,186, and if the present dividend recommended is approved the carry forward will be increased from £45,186 to £82,293 this year.

British-Built Coaches for Canada

THE Gloucester Railway Carriage & Wagon Co. Ltd. is to build 104 cars for the Toronto Transportation Commission, to operate on the Yonge Street Subway, a project described in our April 7, 1950, issue and now in pro-

gress. The order, which we announced in the Contracts & Tenders columns of our November 23 issue and totals some \$7,800,000, was placed after engineers of the Commission had visited rolling stock builders and studied rapid transit operation in Canada, the United States, Great Britain, France, and Belgium. It is the second which this country has received for the Toronto subway, as the Siemens and General Railway Signal Co. Ltd. has already been awarded the contract for the signalling. The vehicles will be some 57 ft. long and 10 ft. wide, with three sliding doors on each side and seating for 62; they will be coupled to form two-car sets up to a maximum of eight cars. The motor equipment is being manufactured by Crompton Parkinson Limited, and the British Thomson-Houston Co. Ltd. will supply the control equipment.

Rule 55 Once More

THE accident at Throstle Nest on December 27, 1950, which was inquired into by Colonel D. McMullen, a summary of whose report appears in this issue, was another case where no real attempt was made to carry out Rule 55, the time limit for which is, in the new Standard Rule Book, 2 min. The two signalmen at the box in rear failed to notice a light engine pass and both also mistakenly believed it to have been cancelled on the describers. The lines approaching from Manchester Central are completely track circuited and worked with block instruments, but this control did not extend to the point where the engine was waiting. The whistles given were not heard in any signal-box, and doubt was expressed as to whether they would have been heeded if they had been noticed, as there is a good deal of whistling in the area. The final result was that all signals were pulled off for a passenger train the driver of which had no chance of avoiding the collision, which was followed by telescoping and two fatalities. It is recommended to extend the track circuiting at this busy spot, and apply it and modern block controls generally in the neighbouring district, where such extra protection would be of considerable benefit.

Advance in Poppet Valve Gear Practice

IN the further development of the British-Caprotti poppet valve gear for steam locomotives an arrangement has been introduced which has as its primary object the provision of the maximum degree of accessibility. Formerly the practice has been to drive the camboxes from a power take-off located on one of the coupled axles between the main frames of the locomotive, which was entirely satisfactory from the operating point of view. The latest arrangement, described elsewhere in this issue, provides for an external drive. In this way there is no interference with the general layout of the locomotive, a feature of importance not only with new construction but also when converting existing stock, as, apart from the cylinders, no alteration is involved in mounting the external drive. This takes the form of a gearbox, return crank mounted on one of the coupled wheels, transmitting motion through shafting to the cambox. This last, in being completely redesigned to incorporate gearing for the outside drive, has been further strengthened and simplified. The development is the result of close collaboration between the designers and suppliers of the valve gear, Associated Locomotive Equipment Limited, and British Railways, and the particular requirements of Mr. H. G. Ivatt, until recently Chief Mechanical Engineer, London Midland Region.

Largest South African Motive Power Orders

ORDERS for new steam and electric locomotives worth £22,000,000 placed or being placed this year are the largest in the history of the South African Railways. A tender was recently accepted from the North British Locomotive Co. Ltd., Glasgow, for 60 mixed-traffic 4-8-4 Class "25" locomotives, but by negotiation between this company and Henschel & Sohn, G.m.b.H., of Kassel, Germany, the number of engines to be supplied will be increased to

140, as recorded in the Contracts & Tenders column of our November 30 issue. It has been decided to introduce condensing tenders on a fairly extensive scale in South Africa, as it is considered to be the solution of the serious water problem in arid parts of the Union and South-West Africa, where a shortage of water for locomotives is experienced nearly every year. An experimental condensing locomotive already in service on the South African Railways was described in our March 30 issue. Locomotives thus fitted will be introduced on the De Aar-Touws River section and their use will be extended as opportunity offers. As its share in the revised contract, the North British Locomotive Co. Ltd., is building 90 condensing engines (without tender); 30 condensing tenders; and ten non-condensing complete locomotives. The Henschel & Sohn, G.m.b.H., order comprises 60 condensing tenders, and 40 non-condensing complete locomotives.

Senior Railway Officers' Salaries

THE salaries of senior railway officers in receipt of £1,600 a year and upwards are to be increased. This is a welcome step, the more so as it will bring benefit to an important section of railway staff whose claims to consideration are no less great because they are necessarily inarticulate. The increases taper down from under 11 per cent. in the lowest scale of the range of salaries covered, to over 7 per cent. at the upper end, and are back-dated to August. As this is the first series of increases for a long period, and as the junior grades have received two increases this year back-dated to January and November, the new increase for senior officers still leaves them at a disadvantage compared with the rank and file. The principle, therefore, of the "differential" in respect of ability, skill, and responsibility, of which so much has been made in the pressing of claims for conciliation staff, has not been followed in the case of the most senior railwaymen. No doubt there have been complications in the standardisation of salaries which differed for roughly the same duties under the former railway companies, and there are still a few anomalies. As the reserve with which matters of senior officers' pay have been treated may have given rise to rumours of increases disproportionately large in the eyes of those who do not appreciate the responsibility and exacting work involved in high office, the Railway Executive might do well to make information on all salaries available, for instance, in works of reference.

Higher pay for those who occupy the most responsible and arduous positions on railways in this country has long been advocated by this journal. The case is a simple one. Heavy responsibility and a high degree of ability and proficiency should be rewarded by a "differential." For those who assume increased responsibilities on appointment to a senior post, whether at headquarters or in a district, and often at considerable personal inconvenience in the matter of changing their residence, the promotion should be made worth their while. Due regard should be paid to the rise since 1939 in taxation and in the cost of living; the concessions in respect of the cost of living so far accorded nowhere correspond to the realities.

The salaries paid to the higher executives of one of the most important industries in the country ought at least to approximate to those of men of equal status in other industries—let alone in other public utilities. At present they are far below them, even taking into account travel concessions and the very few perquisites—such as directorships of other transport undertakings in which the British Transport Commission has an interest as successor to a former railway company—that fall to a handful of senior railway officers. There should be some attempt at equality in salary with other industries which affords some parity in the style of living. Further, in view of the channels of education and self-improvement and of the opportunities for promotion now available to new entrants to the railway service, it is not too much to suggest even in an egalitarian age that there should be, if not "glittering prizes" (in Lord Birkenhead's words) at least adequate material

rewards for which the truly ambitious can compete. As we stated recently, the lack of such incentives is losing recruits to the railways. Finally, the cost of raising the pay of senior officers even to a considerable extent is a very small item of the railways' outgoings. If it be said that in the present period of financial stringency in nationalised transport such increases are an unjustifiable extravagance, the answer is that for the reasons given above they are only equitable, and are productive expenditure.

The Locomotive Industry

THE P.E.P. report on the locomotive building industry, of which a brief notice is given elsewhere in this issue, comes to some gloomy conclusions on the future of British locomotive building firms. Factors unfavourable to the British locomotive export industry are said to be the growth of locomotive manufacture in export markets, the buying out of former British-owned railways overseas, and the rise of diesel traction. In addition, the report stresses the past failure of the railways in this country, for whatever reason, to assist the locomotive industry with orders when export orders have been at a low ebb. Against this, the economic development of backward areas in the British Commonwealth and elsewhere, as is rightly suggested in the report, may create new demands for steam locomotives.

The future of the British locomotive export trade is brighter than the P.E.P. report suggests. The only considerable overseas markets for British-built locomotives where local manufacture has made appreciable progress since the war are India in the case of steam, and Australia in the case of diesel locomotives. The necessarily slow development in India, however, of local manufacture at Chittaranjan and the Tata works, the agreement between the Indian Government and the Locomotive Manufacturers' Association regarding British assistance in local production in return for purchase from Britain of requirements which cannot be met from local output, and the growth of the Indian railways' requirements, do not yet indicate any serious decline in the near future in the Indian market. Nor does the growth of diesel locomotive manufacture in Australia point to any great diminution in steam or diesel orders from Britain. The indications are of enhanced future requirements in both spheres. The buying-out of British interests in overseas railways in Argentina, Brazil, and elsewhere does not seem as such to have caused a reduction in orders from British builders. In some cases, such as Brazil, electrification or dieselisation has checked orders for steam locomotives—with some compensation in electric and diesel orders; and the recent difficulties, now settled, over payment for deliveries to Argentina were not the direct result of buying out the British-owned railways there, though the shortage of sterling resulting from the purchase was a contributory factor. Dieselisation and, to a lesser extent, electrification have reduced steam orders from the railways concerned, but British diesel and electric locomotive manufacturers are building up markets in Australia, Ceylon, Egypt, South America and elsewhere where such changes in traction are taking place. As to the extent to which future intensive dieselisation may be expected on the overseas railways forming the British locomotive export market, the question is mainly one of the price of diesel fuel against that of coal, of the accessibility of the latter, and of the high capital cost of diesel locomotives; these factors have delayed dieselisation in some countries, though not perhaps for long.

Nevertheless, the economic development of backward countries is likely to be one of the best sources of orders for British builders, both steam and diesel. Although dieselisation has proved practicable in some relatively undeveloped countries, as for instance in French African territories, local supplies of coal, the relatively low capital cost of steam locomotives, and their easy maintenance are an important point in favour of steam traction on the many new and extensions of existing railways occasioned by the economic development of tropical African and other

territories. As to competition from foreign builders, the market for British-built steam locomotives does not appear to be in danger yet, largely because of British prices, which at present tend to be lower than those of Continental firms, the turning over to diesel building of the industry in U.S.A., the long-established links between British builders and overseas railways, with the specialist knowledge of local needs born of long experience, and the reliability of British firms, both in the quality of their products and—in contrast to some foreign firms—the honouring of delivery dates. In some cases, it has been possible for Britain to enlist the collaboration of German firms in the execution of orders. Competition from Japan, whose railway supply industry is discussed elsewhere this week, is to be expected; but Japanese exports so far have tended to be confined to the Far East and South East Asia, and this has not made inroads on British markets.

Much is said in the P.E.P. report about the home market for British private locomotive building firms. Whatever may have been the case in former years, and whatever the failure of the former railway companies to place orders with private manufacturers, when, as in the economic depression of the 1930s, export business fell off, it is unlikely that any Government today would allow the skill and plant so long and carefully developed by the industry to go to waste. At present, British Railways, because of improved locomotive user and other factors, are unlikely to have to place orders with outside builders for some four or five years. As we have suggested, however, that is a long time to look ahead, and strategic and other considerations might alter policy. The question in any case is somewhat academic, with order books generally full. In some instances, export orders have surpassed expectations. The P.E.P. report, compiled apparently early in 1950, states that sales of British locomotives to the South African Railways "were expected to decline to a low level in 1950"; this, as recent issues of this journal have shown, has been proved untrue. In this and in certain other respects, and notably in its statistical data, the time-lag between the compilation and appearance of the report detracts much from its value.

Italian Railways During and Since the War

THE Italian State Railways were formed in 1905, when two companies holding State concessions decided to hand over their lines to the State to work; a third company also ceded some of its lines at this time and the remainder in 1907. At first the national system was over centralised, but by 1912 the present form of organisation, in which there are 15 areas or divisions (*compartimenti*), each headed by a chief responsible for all functions in the area, was established.

When Italy entered the war in 1940, the State Railways were among the most efficient railway systems in Europe; but under the double strain of requisition by the Germans, who removed much plant and rolling stock to Germany, and the Allied bombing, they disintegrated. Mr. R. A. Savill, Chief of the Commercial Research Section, North Eastern Region, British Railways, served with the Army in Italy from 1943 to 1946 and thus brought first-hand knowledge to the preparation of his paper "Transport in Italy in Peace and War," read to the York Section of the Institute of Transport on November 8. Marvels of improvisation were necessary to keep traffic moving on the sorely-tried railways when the Allies took them under their military control on the liberation. Between 1940 and 1945 more than 40 per cent. of the total plant of the railways, including 90 per cent. of their electrical equipment, was destroyed.

Italian transport has recovered remarkably quickly, as Signor G. di Raimondo, Director-General of the Italian State Railways, clearly showed in his article in our September 15, 1950, issue. Mr. Savill also mentions the strides made by other forms of transport since the war—largely unrestricted road passenger and freight services little developed before have developed as formidable competitors, but the railways have not lagged behind, regaining

and even surpassing their pre-war efficiency—for example, they have extended electrification, introduced many high-speed multiple-unit electric sets and reconstructed numerous stations. Unfortunately, financial difficulties are now making themselves felt and the State Railways, rather than seek further rate increases which might divert more traffic to the road, are asking the Government to impose some restriction on road operators.

Japanese Railway Supplies

THE efforts which the railway supply industries in Japan are making to re-enter world markets were the subject of comment by Air Vice-Marshal C. A. Bouchier at a conference held under the auspices of the Federation of British Industries early last year. Some note of his remarks was given in our April 21, 1950, issue. It was shown that, according to official statistics, whereas in 1941 the average monthly production in Japan of standard railway material was 63 steam and 3 electric locomotives, 110 passenger and 904 goods vehicles, the corresponding figures at August, 1949, three years after recommencement of production, were 19, 1, 106, and 203. Figures show that, although most of the railway material had been required for the rehabilitated Japanese Government Railways, exports in the second half of 1949 had included 40 steam locomotives, 37 passenger and 490 goods vehicles to Siam and smaller quantities of electric and other locomotives and rolling stock to U.S.S.R., Korea, and the Philippines.

Since then the efforts of the railway industries in Japan to increase their exports has been intensified. Recently, the leading manufacturers of railway rolling stock and associated equipment in that country have co-operated in the preparation of a publication* which is in effect a catalogue of the goods of the members of the Japan Association of Railway Industries. It has been produced for wide distribution and it gives some interesting details relating to the supply position in that country.

Japan became self-sufficient in the manufacture of rolling stock in about 1910. In the latter part of the 1920s it had developed to such a degree that it was able to meet the demands for equipment from Korea, Formosa, Saghali, Manchuria, and China. The number of units exported from 1929 to 1949 was 2,917 steam locomotives, 198 electric locomotives, 3,163 carriages, and 11,154 wagons.

The publication states that the railway rolling stock industry of Japan has been rehabilitated to its pre-war level and gives the following figures of exports.

Destination	Classification	1946	1947	1948	1949
Korea ...	Steam locomotives ...	13	12	2	2
	Electric locomotives ...	4	2		
	Wagons ...		7		
	Tenders ...	6			
	Boilers ...	4			
China ...	Steam locomotives ...		7		
	Wagons ...		47		
	Boilers ...		2		
U.S.S.R. ...	Steam locomotives ...			25	5
	Electric locomotives ...			3	
	Carriages ...			20	
	Wagons ...			272	38
Thailand ...	Steam locomotives ...				50
	Carriages ...				120
	Electric railcars ...				9
	Wagons ...				500
Philippines ...	Carriages ...				52

* "Rolling Stocks, Equipments and Parts." Issued by the Japan Association of Railway Industries, Yasuda Building, Otemachi, Chiyoda-Ku, Tokyo.

In the fiscal year 1950 production of 50 steam locomotives, 70 carriages and 500 wagons is expected for the second shipment to Thailand and 48 steam locomotives, 13 carriages and 886 wagons for oversea shipment to Korea.

The present annual productive capacity in Japan for rolling stock is given as 546 steam locomotives, 145 electric locomotives, 2,047 carriages and 13,470 wagons. Apparently the immediate objective is to develop trade with markets for such equipment in Korea, Formosa, Thailand, Burma, the Philippines, South American countries, Indonesia, China, and all countries in the Far East. It is claimed that Japan's delivery times have been the shortest in recent international public tenders. It is explained that immediately after the termination of the war there were some material difficulties, but that this has been corrected with the progress of rehabilitation of basic industries such as iron and steel, in addition to the introduction of modern manufacturing techniques.

The range of railway equipment covered by the catalogue is wide. Apart from locomotives and rolling stock it covers springs, brakes, car lighting, air conditioning, valves and cocks, and electric equipment. Clearly the importance of the co-operative effort which is being made by the Japanese industry to establish itself not only in the Far East, but farther afield, should not be underestimated by manufacturers in other countries.

Safety First in U.S.A.

DURING recent years a determined effort has been made by American railways to reduce the number of accidents to their employees. This drive has been inspired and is backed by the National Safety Council of the U.S.A., which presents annual awards to the railways with the lowest record of reportable injuries to their staffs. The principal award for 1950 went to the Missouri-Kansas-Texas Railroad, which brought its casualty rate down to 4.49 for every million man-hours worked, against a general average of 6.04 for all the 17 railways in the same size and traffic density group. In achieving this excellent record the railroad reduced its casualties by no less than 43 per cent. in a year.

To be successful, a campaign of this description needs both sound psychological methods of getting its propaganda across to the staff and also the wholehearted support of those directly responsible for safety measures by the administration of the railway. It is based on the education of employees, and of their families and friends, by means of posters, films, lantern slide talks, meetings to which families are invited, safety councils for women, visitation, and staff safety meetings during working hours. At various points on the M.K.T. system last year, 226 such staff meetings were held, with a total attendance of employees of 16,489, and if the evening family meetings are included the total attendance at safety meetings over the year was at least 25,000.

The prevalence in the U.S.A. of level crossings, many of them unprotected, has a special bearing on safety propaganda, and has prompted the production of films giving vivid representations of highway crossing accidents and how they may be avoided. Special publicity releases to newspapers and magazines concerning safety form a part of the plan; so do safety programmes in civic clubs and even sermons in local churches. Safety councils, composed of wives of employees, not only serve to remind husbands of the paramount claim of safety on the job, but also educate the wives themselves on safety in the home.

At the same time the M.K.T. management has not neglected expenditure in the interests of safer operation; there has been steady improvement in main-line signalling and the installation of heavier rails; many level crossings have been eliminated and many more provided with flashing light warning signals; radio communication is being used in yards and on the trains; and more efficient and safer tools are being provided for shop and permanent way staffs. The 43 per cent. reduction in reportable injuries in a year is evidence that these efforts have been fully justified by the results.

Control of Capital Investment

(By a Correspondent)

THE British Transport Commission said in its 1950 report that "the public transport system may count itself fortunate if the ration of capital expenditure allowed to it suffices to patch and maintain the existing apparatus." Looking to the future, the Commission urged "the necessity for a more adequate allocation of the total amount available for national capital investment," if its property was not to stagnate and decay. These remarks apply with special force to British Railways, because the term "capital investment" includes not only money spent on new works and improvements, but also the cost of renewing permanent way, structures, and rolling stock, and of maintaining buildings.

The former railway companies treated capital expenditure differently. To them it signified additional capital required to pay for new works and equipment or for betterments to existing assets. A railway board judged a scheme involving capital expenditure largely by the rate of return which it was estimated to yield. As a rule renewal and maintenance programmes were financed by reserves set aside from profits before dividends were paid. The only outside check on the companies' liberty of action was the cost and supply of labour and materials. British Railways are so far from enjoying such freedom that their property is deteriorating under the stranglehold of the Treasury, exercised through the B.T.C. In the interest of public safety and convenience, the new Government should afford financial and material facilities for restoring the main lines to their pre-war condition by June, 1953. It is also important that restrictions on wagon building should be reduced during the next 18 months in the degree needed to put the stock in a satisfactory state.

Permanent additions to the capital burden already borne by British Railways are in another category, and cannot be scrutinised too carefully. The tendency to spend large sums on passenger stations needs curbing firmly. Much capital sunk on station extensions has proved unproductive. A clear commercial case should be insisted upon in each instance and most carefully examined before further expenditure is approved.

At the present time the wise policy would be to avoid capital expenditure on luxurious equipment which will divert labour and material from essential work. It is difficult to see how in existing conditions the Railway Executive can justify the spending of £306,000 on 36 third class sleeping cars of a new type. The particulars given in *The Railway Gazette* of November 23 and 30 show that one of the new cars will earn less in fares and supplementary charges on each journey between Euston and Glasgow than one of the old standard pattern, because it has six fewer berths. The new cars will be more expensive to maintain and clean, and fourteen cars will be needed to carry the number of passengers which eleven of the old cars would accommodate. So far from increasing net revenue, the introduction of the new sleeping cars will add to working costs and may lead to transfer of passengers from the first class coaches, which were not too well patronised in the London Midland Region during the first eight months of this year.

The B.T.C. is understood to have authorised its Comptroller to set up a Costings Section in his department to probe the financial results of various operations conducted by the Executives. Certainly there is ample scope for inquiry into the profit or loss arising from many activities. The new section might investigate the whole of British Railways' arrangements for providing sleeping car services, which have developed in a haphazard fashion. Now is the time, when passenger charges are in the melting pot, to put these arrangements on a commercial basis. That is only one of many problems which a Costings Section, judiciously directed, could tackle for the enlightenment both of the Commission and the Executives. The Costings Section also should be of assistance to the B.T.C. in the detailed examination of all proposals by the Executives for fresh capital expenditure.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Southern Region Diesel Locomotive

November 27

SIR,—The new Southern Region diesel appears to be doing good work on the West of England main line, but from figures quoted in an editorial note in your November 9 issue—fuel consumption at over 1 gal. a mile—it is difficult to see how it can effect any economy over a steam locomotive, particularly as I understand that it will be unable to tackle heavy summer traffic west of Salisbury unaided. The availability of the diesel locomotive is good, but the number of available turns to enable this type to make best use of its merits in this direction is singularly few on the Southern Region in particular.

Yours faithfully,

J. B. LATHAM

18, Wheatsheaf Close, Woking

Railway Carriage Design

November 23

SIR,—A few days ago I happened to catch sight of a telegram in my Yard Inspector's office announcing that four new coaches were arriving on a certain freight train. Being interested in things new, I went to look at these coaches to see what the Railway Executive's designers had produced. My disappointment was great when I discovered that these coaches, in spite of their bright external appearance and neat internal fittings and furnishings, were of a design first introduced in the early part of the 20th century. Forty years later, the Railway Executive introduces a non-vestibule brake composite vehicle with four third class and two first class compartments and a small guard's compartment. They are to replace a similar type of vehicle built by the Great Northern Railway about thirty years ago, but they lack the lavatory accommodation of the latter. These coaches will work in three-four-coach sets on certain Lincolnshire branch lines.

Each summer, non-vestibule coaches and former London suburban sets are pressed into use for carrying holiday makers from inland towns to East Coast resorts. Some of these journeys are of two hours duration or over, and the lack of lavatory accommodation, straight-back seats and primitive furnishings make them quite unsuitable for the conveyance of holiday makers and their children and luggage. The poor railway official, already harrassed, has to stand the angry abuse of passengers, who, having to pay the existing high railway fares are condemned to travel in these trains made up of non-vestibule vehicles, yet the Railway Executive is now constructing non-vestibule vehicles, when the immediate need is for vestibule coaches.

Although it may be argued that the non-vestibule coaches are cheaper to build, much expense could be saved on the construction of coaches, by abandoning the compartment type and producing the open type. In the new building programmes, few open coaches are to be built, yet the Hotels Executive has stated that it is its ultimate aim to serve refreshments throughout trains making journeys of three hours and over. There is nothing more exasperating than trying to cope with liquid refreshments in a compartment type coach with no tables or ledges on which to rest the crockery. The service by the attendants is also made more difficult in the compartment type of coach because of its design. There seems a lack of co-operation between the designers of modern coaches and the Hotels Executive.

It is time the traditional compartment minded railway designers gave way to the modern trend of "open" mindedness. The non-vestibule coach is an anachronism long abandoned by countries abroad. I was pleased to see that on the Liverpool Street - Shenfield electrified service the open type of coach was adopted in spite of severe criticism from outside.

The replacement of non-vestibule vehicles by vestibule

coaches would have the following benefits to the Railway Executive and the public:—

(1) Greater comfort and security for passengers. Many women and children are afraid of travelling in non-corridor coaches for fear of being molested. The emergency communication system is much the same as when introduced, and in a fire, a non-vestibule vehicle is a death trap.

(2) Less likelihood of internal fittings and furnishings being damaged, as the guards have access to the whole of the train. (Within a few days of the new coaches being introduced in the Boston area, a seat had been slashed and other damage had been caused to internal decorations.)

(3) Travelling ticket collectors can make more frequent checks on local trains, and revenue now lost through passengers travelling without tickets or with out-of-date tickets can be regained. The movements of travelling ticket collectors are too well known and are nearly always confined to particular trains. On certain lines tickets can be issued on the train.

(4) Greater interavailability, as the stock could be used for main line or local work. At present, branch line stock of the non-vestibule type is most unsuitable for long-distance trains.

Yours faithfully,

R. F. GRAVESON

26, Brothertoft Road, Boston, Lincs.

Railway Staff Problems

November 23

SIR,—Recent editorial interest in railway pay problems has been notable for two things, a lack of sympathy and a lack of knowledge of the subject.

Whilst the article entitled "Railway Staff Problems" in your November 16 issue may not be guilty of the first it falls dangerously near to the second, as it would appear to imply that senior officers are alone in that their salaries have risen only 50-70 per cent. since 1939.

In fact, the salaries of senior clerical grades are as bad. The increase of salary for maximum Grade I is only 62 per cent. and was 50 per cent. before the recent award. Young people may be excused for regarding railway work as a dead end job.

Yours faithfully,

L. ENSOR

Blythswood, Heath Road, Horsell, Woking

[We did not suggest that senior officers were alone in receiving increases of salary disproportionate to the rise in the cost of living and in taxation. We pointed out that senior clerical staff are seriously affected by these factors and that the pay increases they have received are "disproportionate to those granted to junior grades, so that the differential in respect of increased responsibility has diminished." We also commented on the effects of reduced prospects on recruitment.—Ed., R.G.]

Third Class Sleeping Cars

November 30

SIR,—In the illustration of the exterior of the new British Railways sleeping cars in your November 30 issue, I was surprised to see that the doors carried the figure "3" to indicate the class. Surely British Railways have given up the use of such markings confining them to first class carriages, with a resulting economy in labour and materials, as well as improving the appearance of the average carriage. As it would hardly seem necessary to make an exception for the new sleepers, it must be presumed that there has been a change of policy or that the painting was done by mistake.

Yours faithfully,

P. W. B. SEMMENS

52, Belle Vue Grove, Middlesbrough

THE SCRAP HEAP

False Alarm

Explosions and the noise of steam whistles so alarmed people living near Hythe Station on December 2 that the police were informed that there had been a railway accident. Ambulances, doctors, and nurses were asked to stand by. The police then found that there was no accident, but that the "funeral" of the Hythe-Sandling branch line was taking place. The last train had just left to a dirge of its own whistle and fog signal detonators placed on the line by a coach-load of railway enthusiasts. —From "The Daily Telegraph."

Circus Comes to Town by Rail

Last week, baggage, equipment, and animals for the Kelvin Hall Circus went by rail to Glasgow from many parts of the country. On November 26, fourteen polar bears were received at Partick Station from the Continent, and next day a special train-load of Shetland ponies from Blackpool arrived at Stobcross goods station, while on November 28 four elephants and a number of horses from Harwich were unloaded at Partick goods station. The animals walked from the station to the Kelvin Hall. Over 200 railway containers with equipment were received at Glasgow in connection with the carnival.

Ireland Mourns G.N.R.(I)

The Great Northern Railway (Ireland) has gone the way of most of its colleagues in these islands. It is sad to see the old G.N.R. go, for the same reason that many people in England, whatever their views on nationalisation, were sorry when the Great Western lost its identity. Whereas the other old railway systems of Ireland were targets at best for ridicule, and more usually for invective (the "Dublin, Wicklow, & Wexford," it may be remembered, was rarely called anything but the "dirty, wicked, and wretched railway") the G.N.R. for some reason retained its popularity to the last. Its solvency, too, was threatened only in comparatively recent times. —From the Dublin correspondent of "The Sunday Times."

Highest and Lowest

In the U.S.A., there is a National Safety Council which presents annual awards to the railways with the lowest record of reportable injuries to their staffs, and last year the principal award went to the Missouri-Kansas-Texas Railroad, whose safety-first campaign is the subject of an editorial article in this issue. A system of awards has been devised on the M.K.T. whereby the superintendent of every operating district or shop with the best safety record for the month is presented with a model of an hotel, complete with penthouse, to stand on his desk, which is retained

until another group tops his record; whereas the superintendent whose group shows the worst record is presented with a model of a dog kennel! Plaques are awarded each year as a permanent possession to the shop with the best yearly safety record.

Moonshine Underground

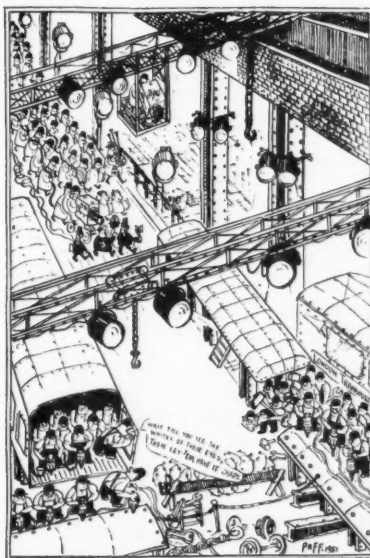
A stretch of high ground, Cranberry Moss, until the coming of the railway, sealed the Darwen Valley at its southern end, and it was well known that spirits were distilled there in secret and in defiance of the Excise men.

Sough railway tunnel, linking Blackburn and Bolton, was driven through this in 1845-48, and an army of 400 men encamped nearby was a stimulus to the illicit trade. Not without co-operation from workmen and "gaffers," stills were established at the bottom of each of the nine shafts sunk before horizontal tunnelling started, and there were some very lively doings.

In view of the "moonshining" that accompanied the work, it is worth mentioning perhaps that the 2,020-yd. tunnel when completed was within 2 ft. of a straight line. —From "The Manchester Guardian."

On the Alert for TV

Some weeks ago, as was recorded in our issue of November 16, the television cameras of the B.B.C. were focussed on railway carriage construction in the Midland Works of the Metropolitan-Cammell Carriage & Wagon Co. Ltd., the subject chosen on this occasion being the manufacture of London Transport light-alloy surface-line cars. Members of the staff were selected to speak about their particular jobs, and according to the artist whose



Metropolitan-Cammell workshop staff on the alert for television cameras

drawing is reproduced in the previous column, works personnel were well drilled for the occasion.

Homes for Railway Horses

More redundant British Railways horses have been taken over by Our Dumb Friends League and homes found for them. During the past two months 25 railway horses have been acquired. Since the O.D.F.L. fund was initiated more than 200 horses have been saved from slaughter and put to useful work.

Preston Spotters Banned

Engine spotting boys are to be banned from Preston Station. A station official said: "Some of the boys have been in danger of killing themselves. They race down the platforms, steal rides on trucks, stoke up the fires, and monopolise the waiting room. They climb signal poles and even run on the line." —From the "Daily Express."

Jackpot

A woman put four pennies in an automatic ticket machine at Baker Street Station. Ticket after ticket showered out and the floor was soon littered with tickets correctly date stamped and ready to use on the Northern, Bakerloo, and District lines. Ticket collectors hastily cleared passengers from the spot, and spent ten minutes picking up the tickets. —From the "Daily Mail."

Porter Bill

Now Porter Bill's a hefty chap,
His chords are ultra vocal;
When he announces trains, he's heard
A mile off in the "local."

He's far too cute to take a "stripe,"
In fact, he shuns promotion;
But, though he's true to Number One,
He doesn't lack devotion.

As he explained to me one day:
"I ain't no bloomin' clurk, Sir,
"And bits of braid around the cap
"Don't compensate for 'perks,' Sir."

But, when things get the upper hand
Of rule and regulation,
Old Bill steps in and, with a grin,
Proceeds to run the station.

He's full of salty, sage advice;
"Look, now, it's like this 'ere, Sir,
"When folks say things ain't what they
were—
"Lumme, they never were, Sir!"

Bill's sentiments on modern youth
Are piquant and abundant;
"If any of 'em axes me,
"I'll tell 'em who's redundant!"

Men flit from job to job these days,
To one thing constant never;
It puzzles me, but—glory be—
Old Bill goes on for ever.

A. B.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

RHODESIA

Direct Line to Lourenço Marques

A decision will be made next week on building a direct railway to Portuguese East Africa. The Transport Minister has said that he hoped it would be possible to start building next year; if so, it would be completed in three years. Although the line to Portuguese territory through Guija, on the Limpopo River about 100 miles north of Lourenço Marques, would mean access to a second port, the Minister said he thought Beira would remain the chief port of Southern Rhodesia.

BURMA

Rangoon-Mandalay Line Gap Closed

The gap between Pyinmana and Tatkon which has interrupted through communications on the Rangoon-Mandalay line since April, 1949, has been closed; departmental trains began running on October 24. This achievement will contribute greatly to the general economic recovery of the country. New bogie third class 56-ft. coaches have been placed in service on the Rangoon-Mandalay line. From October 12 two extra coaches have been attached to some local trains during rush hours to relieve congestion.

CANADA

C.P.R. Oil Rights

Profitable oil rights owned by the Canadian Pacific Railway and leased to others include 225 producing wells. Some 55,000 acres of C.P.R. oil rights are under lease to oil companies, and another 11,291,000 acres are still under reservation for exploration. The company's charge for exploration reservations is 10 cents per acre annually for up to 200,000 acres, with additional areas on a reducing sliding scale.

When investigation shows favourable conditions, the reservation or part of it is usually converted into an oil lease on the basis of \$1 per acre annually plus one-eighth of the current market value of the petroleum products produced. The total area to which C.P.R. holds petroleum rights is 1,384,256 acres (2,847,799 in Saskatchewan, 8,265,136 in Alberta, and 271,321 in Manitoba. Last year \$1,900,000 in rentals, royalties, and fees was received.

Railway Expansion

The Canadian transport system is rapidly expanding and keeping abreast of a growth in the national economy, which the Minister of Transport has termed "spectacular." The two major railway systems are ordering 100 diesel locomotives, in addition to 350 already placed in service since the war. As, however, the introduction of diesels

can only be gradual they have acquired more than 100 additional steam locomotives to meet immediate needs.

New lines are being planned to link the main lines with Kitimat in the Pacific North-West to convey the large output of aluminium to be developed there, where the population is expected to increase to 7,000 in three years and eventually to 50,000. In Northern Manitoba, the railways are building a 155-mile line between Sherridon and Lynn Lake to assist development of rich nickel-copper deposits.

Exploitation of newly-discovered copper deposits near the St. Lawrence village of Gaspé may necessitate a new C.N.R. line into the area, and improved transport facilities may develop from discoveries of promising lead-zinc deposits at Pine Point, on the south shore of the Great Slave Lake in the North-West Territories. The major railways are not alone in expansion; as part of a \$200,000,000 investment, mining interests are constructing a 358-mile line from the north shore of Seven Islands, Quebec, into the Ungava region, whence, by 1955, iron ore will flow southward at the rate of 10,000,000 tons a year.

ARGENTINA

Hurlingham Station Renamed

Hurlingham Station on the General San Martín Railway has been renamed 28 de Septiembre, to commemorate the crushing of the abortive revolt against the Government on September 28, 1951. Hurlingham has a large British community and is the site of the club of that name, famous for its polo and other sports meetings.

UNITED STATES

"City of Miami" Service

A second "City of Miami" train which will double the Illinois Central Railroad service between Chicago, St. Louis and Florida, will be placed in service on December 12. The "City of Miami" will operate on two out of three days instead of every third day as at present. The increased service has required the addition of a second complete set of streamline equipment representing an investment of more than \$3,000,000.

The train has grown from a single train of six coaches in 1940 to a double set of equipment each consisting of fifteen coaches. Leaving Chicago each train will be made up of five Pullman cars, four coaches, two 48-seat dining cars, a Pullman sleeper-lounge, and observation-lounge and a baggage-dormitory car. A through Pullman from St. Louis will join the train at Carbondale. Southbound, the "City of Miami" leaves Chicago at 8.10 a.m.,

and St. Louis at 9.22 a.m., and arrives at Miami 3.40 p.m. the next day. Northbound, the train leaves Miami at 5.40 p.m., and reaches St. Louis at 8.45 p.m., and Chicago at 10.55 p.m., the next day.

The Illinois Central service to Florida was improved on December 1, when a through Pullman car began to operate on alternate days between Chicago and St. Petersburg and between Chicago and Sarasota-Tampa. Daily through Pullman service is also now operated between St. Louis and Jacksonville and between Chicago and Birmingham. Other improvements in Illinois Central passenger service include new full-size lounge cars, in addition to observation-lounges, on the "Panama Limited" between Chicago and New Orleans.

IRELAND

Diesel Service to Killarney

In connection with the Killarney Tourist Association's request for a connection at Mallow from Killarney with the up and down "Enterprise" express during the tourist season, Mr. T. C. Courtney, Chairman, C.I.E., has informed the association that C.I.E. intends to run diesel trains from Mallow to Killarney to speed up travel during the next tourist season.

Tribunal to Study Branch Lines

The Ministry of Industry & Commerce has announced the forthcoming establishment of a Transport Tribunal to expedite the consideration of applications by C.I.E. in respect of branch lines. The Tribunal would decide, after inquiry, whether services would be restored either fully or to a modified extent, or would be permanently discontinued. The Minister stated that he had asked the Board of C.I.E. to consider specially all the branch lines on which services had been discontinued and decide as soon as possible their intentions as to those lines.

SPAIN

Corunna-Zamora Line

The Minister of Public Works has announced that it is planned to bring into use the new Orense Junction Station in 1952, and all the traffic will thenceforward be handled there. At the same time the section of the new Corunna-Zamora line between Zamora and Pueblo de Sanabria will be brought into service.

Statement by Talgo Inventor

Señor Goicoechea, the inventor of the Talgo train, has made a statement in which he says: "A great many accidents arise in all countries as often as not from the attempt to obtain with

heavy rolling stock speeds to which it is unsuited, but on the other hand if we do not raise the speed of rail transport we shall lose the fight being waged on its behalf. Naturally, the Talgo train was devised with the idea of transporting at high speeds easily perishable goods. You can say that the train running between Madrid and Irun is not, from the technical standpoint, the definite solution to the question, but rather an inferior example of what will be produced."

Senior Goicoechea's new proposals for a train of this type, would take advantage of the experience gained and incorporate improvements in the light of more knowledge. Such a revolution in railway working would cost much money, as all existing rolling stock would need to be replaced, but as time passed the lower operating costs, higher speeds and greater security would make the heavier construction of today only a memory.

AUSTRIA

New South Terminus in Vienna

As already reported in our November 16 issue, the Federal Railways are planning a terminus in Vienna to replace the South and East termini badly damaged during the war. The new terminus is to be built on a site where the lines run-

ning into the South and East stations would intersect if extended. For financial reasons the differences in level between the two lines will have to be retained. The new terminus will have three levels: a large hall at street level, an Eastern line level about 13 ft. higher and a Southern line level 17 ft. above that.

The new terminus will follow plans worked out by the Building Department of the Federal Railways. Arriving and departing passengers will be kept separate. On the street level there will be the arrival and departure halls, booking office, luggage office, goods office, a small post office with a sorting room, enquiry office, a timetable hall, a tourist agency, a hairdressing saloon, and lavatories.

The first floor will contain the concourse of the Eastern line. Trains will leave both from the right and the left side, and therefore there will be exits for travellers on both sides of the concourse; on this floor also there will be waiting rooms, offices, and a restaurant. On the second floor there will be the concourse of the Southern line; the left side will be for departures. On this floor there will be waiting rooms, a bar, stalls, offices and a luggage-lift.

There will be room for nine platforms on each floor, but for the time being only seven will be built. The platforms

will be 25 ft. wide, and about 370 yd. long. The width of the two outer platforms will be 17 ft. The platforms will be protected from the weather by the umbrella roofs. Passengers departing by train will reach the platforms from the main hall by escalators, or by 17 ft. wide stairways. Those arriving will use stairways leading down to the concourse of the Eastern line and to the main hall. The luggage will be conveyed to the Eastern line level on a ramp, and to the Southern line level by means of a luggage lift. The preparatory work for the new terminus is well under way. It is expected that construction will begin before the end of the year.

ITALY

Reconstruction and Modernisation

The sum of lire 675,400,000 (approximately £380,940) has been earmarked by the State Railways for the modernisation and reconstruction of lines, mainly in the south. Among them is the single-track electrified section from Battipaglia, 46 miles south of Naples, to Reggio Calabria, 248½ miles, which has been heavily taxed by the increasing citrus and vegetable export traffic which is conveyed over it from Sicily to destinations in Western, Central and Northern Europe.

Publications Received

Locomotives: A report on the organisation and structure of the industry, its products and its market prospects at home and abroad. (P.E.P. Engineering Reports—III.) London: P.E.P. (Political & Economic Planning), 16, Queen Anne's Gate, S.W.1. 9 in. × 6½ in. 75 pp. Illustrated. Price 12s. 6d. net.—This report, the subject of editorial comment on page 619, examines the organisation and structure of the locomotive industry against the background of problems such as the decline of railways generally between the wars, the precariousness of the present apparent prosperity, and the emergence of diesel traction. It discusses market prospects at home and abroad; although some technical matters are discussed, the report is written primarily for the non-technical readers. Much statistical material covering output, costs, British exports, and the world market for locomotives and parts, illustrates the text. The report generally suffers from the lapse of time between its inception and publication.

Directory & Handbook of the Scientific Instrument Manufacturers Association, 1951. London: 20, Queen Anne Street, W.1. 8½ in. × 5½ in. 251 pp. No price stated.—In addition to information concerning the history of the scientific instrument industry in Britain the main features of this book are a directory of 104 instrument manufacturers in this country who are members of the Association and an index giving

the sources in Britain of some 2,500 scientific instruments. Some idea of the increasing production of this industry may be gathered from the fact that the present index is 20 per cent. larger than that of the previous edition of 1947.

Manual Lifting and Handling.—This handy booklet written by Mr. T. McClurg Anderson is published at 2s. by the Industrial Welfare Society in association with the Central Council for Physical Recreation and it applies to problems of manual handling in transport and industry generally the basic principles of weight lifting as developed in recent years by physical culture experts. The booklet embodies the substance of courses run by the Industrial Welfare Society and should prove very useful to supervisors and others in charge of training.

Early History of the Electric Locomotive. By F. J. G. Haut, B.Sc.(Eng.), A.M.I.Mech.E., M.Inst. I. & S. Purley, Surrey: published by the author at 2a, Monahan Avenue. 10½ in. × 8½ in. 12 pp. of text and 4 pp. of illustrations. Price 15s.—The text of this publication is a paper read to the Newcomen Society in London on January 10, 1951, which is now made generally available, with reproductions of most of the illustrations originally accompanying it. We commented on the paper in our February 23 issue and many students of electric traction will welcome its chronological survey of development from 1842 to 1905. The latter part of this period covers the competition for

favour between d.c. and the two a.c. systems and the reasons for their roughly simultaneous evolution are well explained. This is still a controversial topic, and likely to remain so, now that the use of industrial frequencies enables the case for single-phase a.c. to be presented in a new light. In tracing the evolution of mechanical design, the author brings his review up to the present day and his illustrations are particularly interesting.

Application of Rubber to Vehicle Suspension.—During recent years there has been a growing interest among locomotive engineers in the use of rubber as a stress-carrying material, and in the November issue of *Torque* published by Silentbloc Limited are given some details of the new swing-link suspension designed by the Metropolitan-Vickers Electrical Co. Ltd., in which Silentbloc bearings support and cushion the entire weight of the locomotive or carriage body and permit articulation of the body in relation to the bogie.

Glossary of Terms Used in the Plastics Industry.—This glossary published by the British Standards Institution was compiled by the British Plastics Federation and the terms and definitions given have been the subject of long and careful study. They are those most widely used in the British plastics industry. It is hoped that later the present compilation will serve as a basis for discussions on an international glossary for plastics. The booklet (B.S. 1755:1951) is published at 6s.

Modernised Marshalling Yard at Toton—3*

Functions of the control tower, and the provision and operation of railbrakes

ABOUT 150 yd. from the hump room, and approximately 30 ft. from the nearest rail on the outer (east) side of the point area leading into the sorting sidings, is a three-storey structure known as the control tower. The primary object of this building is to provide an elevated commanding position from which the running of wagons through the switching area and into the sidings can be observed and corrective action taken to avoid cuts for different sidings overtaking one another prematurely. Another important object is to ensure that vehicles do not collide at excessive speed with others already in the sidings.

For this purpose, railbrakes are provided in the four main leads to the 37 sidings, remotely controlled from this tower, and the power-operated points, which normally work automatically during a humping operation, in response to the route-setting process set up in the hump room, can, when necessary, be worked individually from the tower.

The tower is of reinforced concrete construction and a plan showing the layout of each of the three floors is given in Fig. 9.

The floor of the operating room is approximately 22 ft. above rail level at a central point, and good visibility of the whole of the sidings layout from the hump, through the braking and switching area, and for some distance inside the sorting sidings, is provided by ample glazing with as few obstructions as possible. The essential window panes reach almost to floor level to permit continuous vision of those movements nearest to the tower.

Point and Railbrake Control

On the left-hand side of the operating room facing the yard is a cabinet carrying a sloping panel comprising a diagram of the layout of the entire point area from the king points and leading into the sorting sidings. A plan of this panel is given in Fig. 10. As will be noted from the key accompany-

ing the diagram, the panel is fitted with a three-position thumb switch for each pair of points—the central position of the switch being for the automatic routing process. Transit lights in the thumb switches are displayed as wagons pass on the point track circuits, and correspondence lights appear in conformity with the point detection.

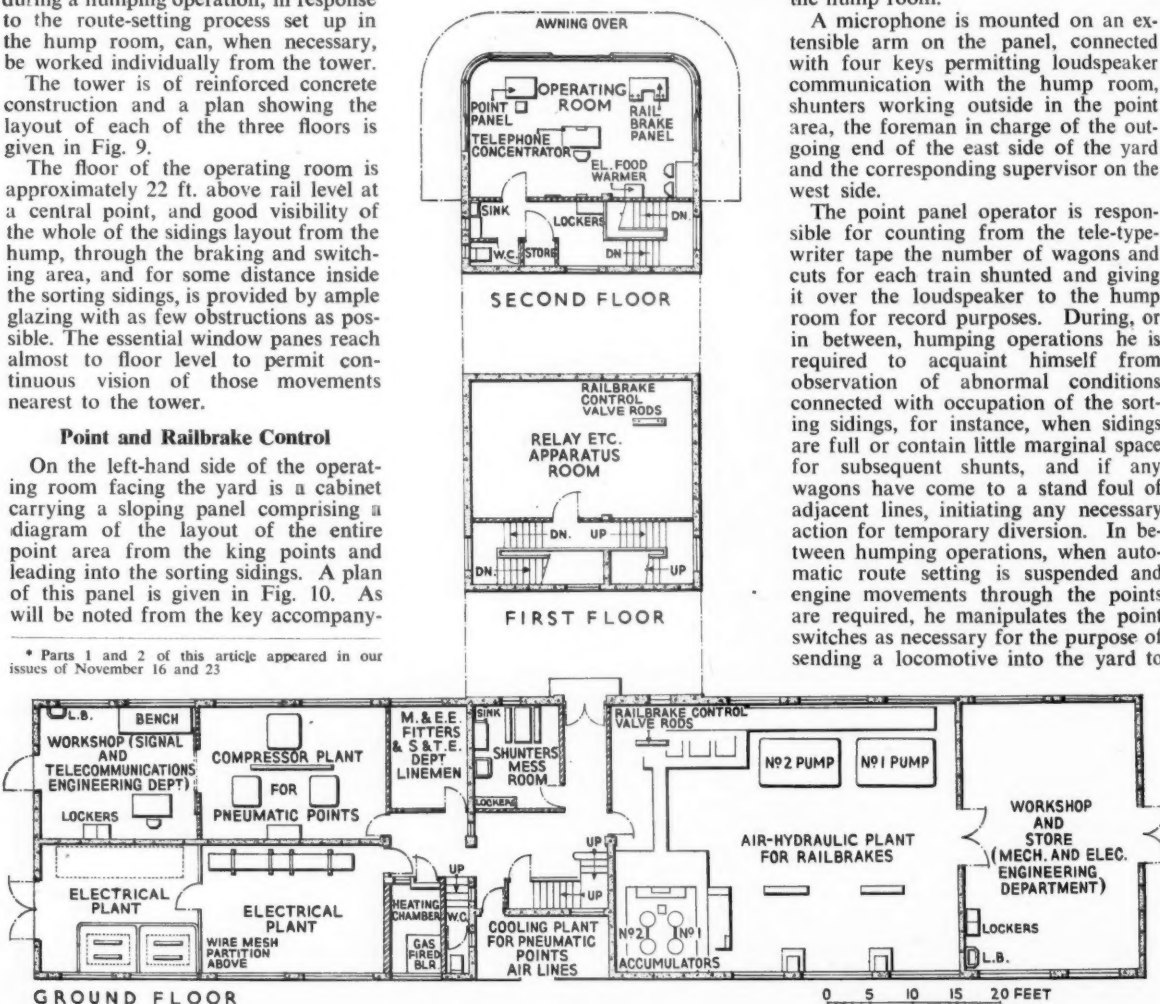
The duties of the panel operator are to observe movements during a humping operation and if, due to differing running characteristics of wagons, he sees there is a risk of premature overtaking in the point area of cuts for different routes, he can, if necessary, switch out a particular set of points from automatic to non-automatic, noting the diversion so that the cut can afterwards be re-shunted. In conjunction with the jack, that is, the third series of points, a stepping push button

is provided, which enables the correct sequence of the following cuts in storage to be maintained, should one cut overtake another on the track circuits associated with those points, thereby limiting the occurrence to one incorrect shunt.

The centre of the panel contains an aperture in which a tele-typewriter paper tape gives the siding number and composition of each successive cut. A portion of this tape to actual size is shown in Fig. 11; the tape moves upwards as each entry is printed in response to the push-button depression in the hump room. A switch is provided on the panel to enable the humping signals on the arrival lines to be placed to "stop" direct, should emergency arise, thus avoiding any time lag however small, which might occur if the request had to be passed through the hump room.

A microphone is mounted on an extensible arm on the panel, connected with four keys permitting loudspeaker communication with the hump room, shunters working outside in the point area, the foreman in charge of the outgoing end of the east side of the yard and the corresponding supervisor on the west side.

The point panel operator is responsible for counting from the tele-typewriter tape the number of wagons and cuts for each train shunted and giving it over the loudspeaker to the hump room for record purposes. During, or in between, humping operations he is required to acquaint himself from observation of abnormal conditions connected with occupation of the sorting sidings, for instance, when sidings are full or contain little marginal space for subsequent shunts, and if any wagons have come to a stand foul of adjacent lines, initiating any necessary action for temporary diversion. In between humping operations, when automatic route setting is suspended and engine movements through the points are required, he manipulates the point switches as necessary for the purpose of sending a locomotive into the yard to



* Parts 1 and 2 of this article appeared in our issues of November 16 and 23

Fig. 9—Plan of control tower building, Toton Up yard

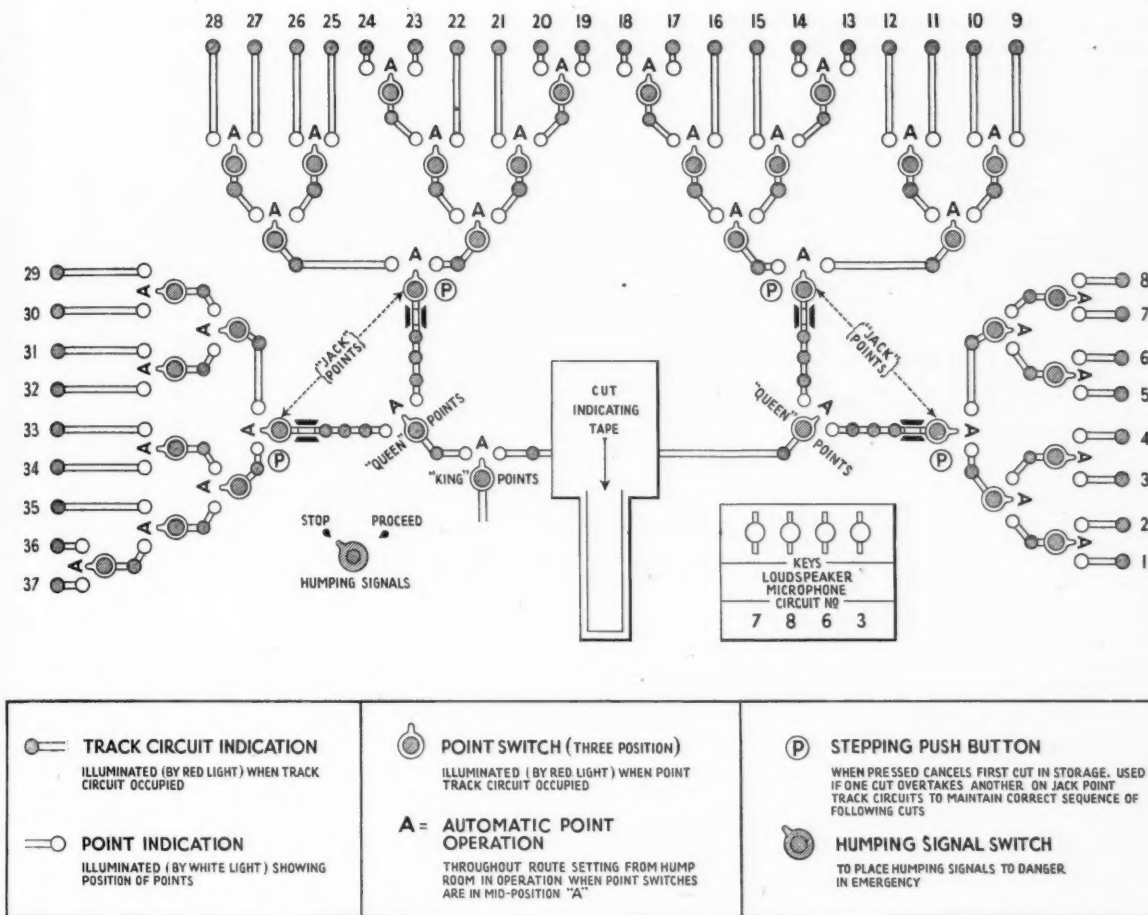


Fig. 10—Diagram of point panel in control tower

close wagons together, correct a wrong shunt, or shunt out a damaged vehicle, or for any special purpose which may arise.

The loudspeaker microphone and four keys mentioned are duplicated at the telephone concentrator cabinet on the desk in the centre of the room so that any member of the supervisory staff in attendance may use any of the loudspeaker circuits not otherwise occupied.

Railbrakes

On the right-hand side of the room facing the yard is a cabinet in which are fitted four levers, one for each of the four railbrakes. In the centre of the upper face of the cabinet is an aperture through which passes a duplicate of the tele-typewriter moving paper tape on which is printed each successive number of siding and wagons in a cut as transmitted from the hump room. This enables the operator to see at a glance and in proper sequence the destination siding and composition of each cut as it leaves the hump, which is necessary to enable him to determine the amount of railbrake pressure to apply to keep wagons properly spaced

and avoid excessive buffing concussions. On the upper face of the cabinet there also are indications which are illuminated in successive sections between the king points and the railbrakes when the track circuits are occupied. Three short tracks between the queen points and the railbrakes provide a useful indication in fog of the speed of wagons approaching the railbrakes.

The running characteristics of wagons are not uniform and as a yard with a high degree of remote control of wagon movement is designed with gradients sufficiently steep to cater for the worst-running vehicles, something is needed to retard good runners. This is necessary to maintain adequate spacing of cuts likely to overtake any proceeding on to adjacent lines and to avoid excessive concussions with other vehicles after entering a siding. Apart from the employment of a shunter at the entrance to each fan to deal with exceptional loads, brake vans, or any emergencies which might arise, the retarding of wagons running at excessive speed into the sorting sidings is carried out by means of railbrakes, of which there are four sets, one in the lead to

each fan, and they are operated from the control tower as previously mentioned.

Each railbrake set weighs approximately 45 tons, and comprises a bedplate on which are mounted braking beams 62 ft. long on either side of both running rails. They are of the type originally known as Frolich and are constructed on the weight-automatic principle, whereby a wagon automatically applies a certain amount of braking proportionate to its weight, and the grip on either side of the wheels can be regulated as necessary by operating the levers in the control tower.

A cross-section of a retarder is given in Fig. 12, which shows the braking rails in the operative (raised) and open (lowered) positions respectively. The braking rails rise to approximately $4\frac{1}{2}$ in. above the top of the running rail, in the braking position. Oil is used as the hydraulic medium, thereby improving the operation of the mechanical portions of the equipment and obviating freezing in very cold weather. An innovation at the new Up yard, as compared with the Down yard, where a hydraulic accumulator of the weight-operated type is in use, is the provision

	WAGONS IN CUT ↓	SIDING NUMBER ↓
DIRECTION OF MOVEMENT OF TAPE. INTERIOR OF APERTURE ILLUMINATED ↑	4	7
	6	23
	1	28
	6	29
	1	27
	1	24
	1	29
	1	1
	1	20
	NON-RETARDER ↓	*
NOT DESCRIBED (GIVEN OVER LOUDSPEAKER WHEN CUT EXCEEDS SIX) ↓	—	20
	1	35
	1	20
	4	14

Fig. 11—Tele-typewriter tape (actual size), in control tower railbrake and point panels

of air-hydraulic accumulators. There are two of these accommodated in the room housing the pumping machinery on the ground floor of the control tower.



Close-up of wagon in railbrake

The four railbrakes are substantially of the same type as those in the Down yard. In fact when certain minor alterations now being carried out to the pits at the Down yard are completed, the Up and Down side retarders at Toton will be interchangeable. It is of interest to note that, although wearing strips on the railbrake beams have been replaced as necessary at the Down yard, the bedplates at that yard are, for the first time since installed early in 1939, now being lifted out in succession for detailed examination and reconditioning. It is estimated that more than three million wagons have passed through each of the Down yard retarders since they were put down twelve years ago.

Under the Up yard scheme, the opportunity was taken to acquire a spare retarder, so that a gradual programme can be arranged for carrying out major

reconditioning in future of both the Down and Up yards retarder bedplates in rotation, which is only possible by complete removal from pit. Neither at the Down nor the Up yard would it be possible to deal with traffic currently in the absence of one retarder at either yard for any period of such length as removal and major reconditioning must inevitably entail. The provision of a spare retarder has avoided this difficulty.

Railbrake Pits and Subway

Current maintenance of railbrakes *in situ* entails of necessity a certain amount of possession by the Engineering Department responsible, ranging from quite short periods daily to more lengthy periods weekly, monthly, and so on. The density of traffic through Toton Up yard is such that long interruptions to shunting into any one fan

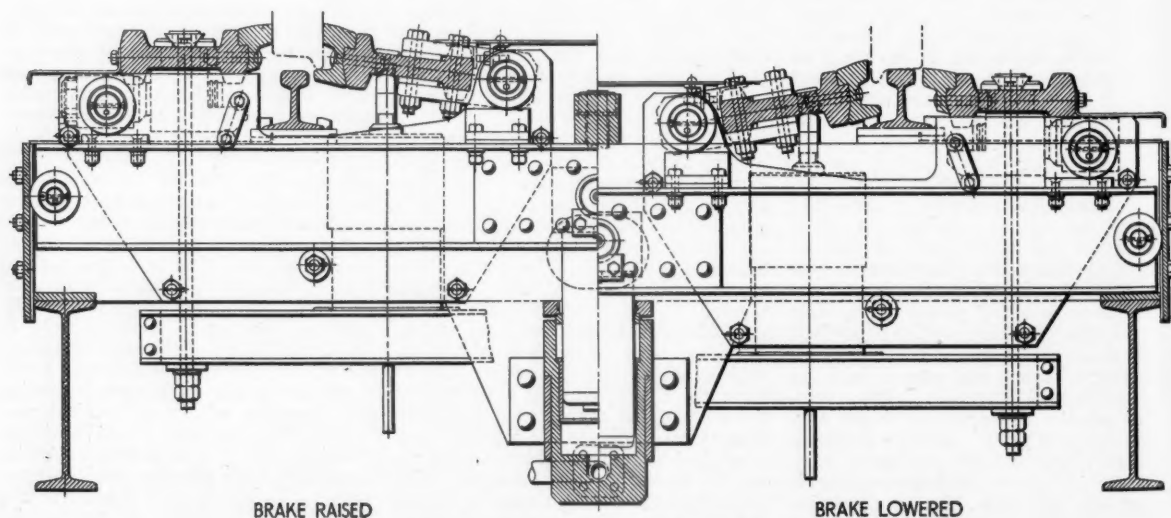


Fig. 12—Cross-section of railbrake



Maintainer at work in rail brake pit

would have too detrimental an effect on the operations generally, as the yard is open continuously from 6 a.m. Mondays to 6 a.m. Sundays, with extensions on Sundays according to circumstances,

particularly during the winter months. To permit as much maintenance of the railbrakes as possible, without stopping shunting, it was decided to provide pits sufficiently deep for main-

tainers to work on the underside of the railbrakes, and for access to be given to each pit by an opening at one end from a transverse subway. This connects to each pit at the hump end, and at the main line side it extends underneath the train engine release and brakevan lines, with ramp access at each end having a slope of 1 in 8. An accompanying photograph shows a maintainer at work in one of the pits.

The subway has a clear height of 7 ft. and is 6 ft. wide; it provides accommodation for main power supply cables and the hydraulic pipe connections to the railbrakes. It includes a drainage channel having a fall into a sump for collecting surface water, which is discharged automatically by an electrically-driven pump.

The inspection pits slope towards the subway and give headroom beneath the retarder cross-beams of 6 ft. adjacent to the subway, decreasing to 4½ ft. at the opposite end. Both the pits and the subway are equipped with electric lighting, and scale from wagon wheels, and dirt falling into the pits can be swept up readily and barrowed out via the subway. The subway also provides a convenient means for persons to cross this part of the yard in foggy weather and when humping is in progress.

(To be continued)

New Rolling Stock in Argentina

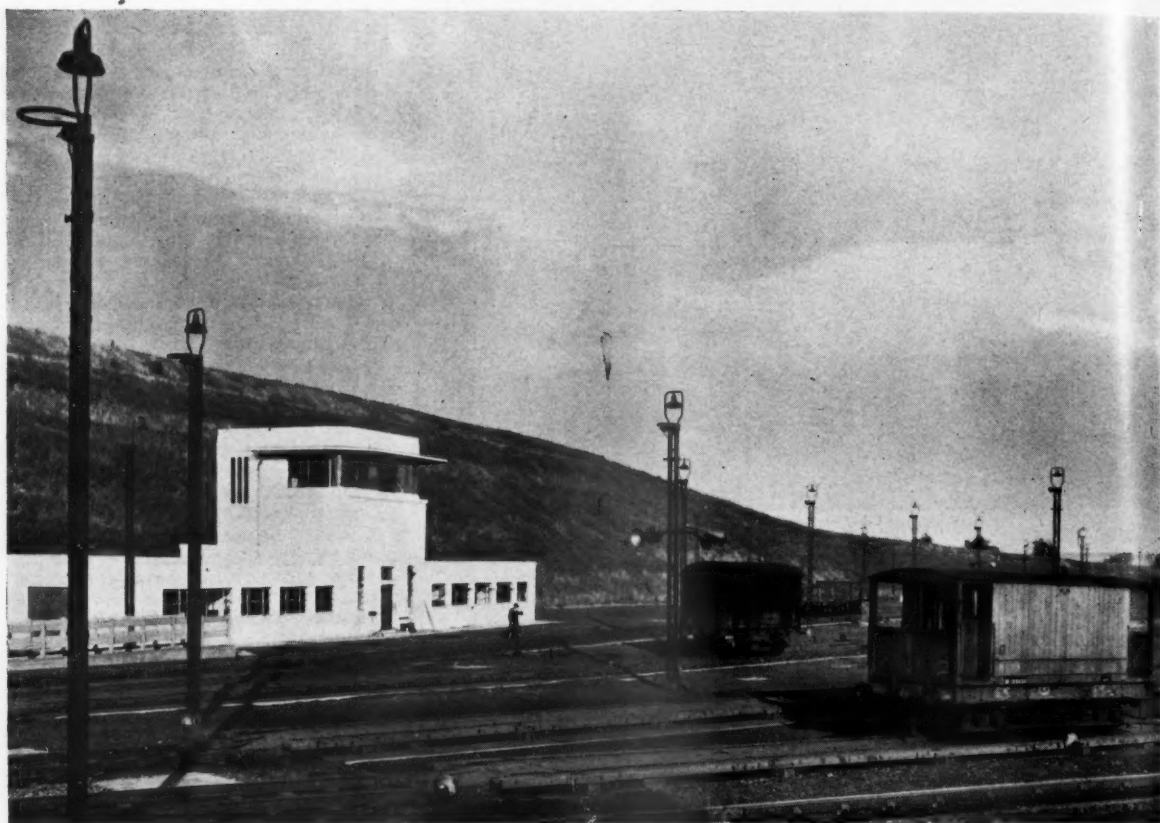


Air-conditioned Budd stainless-steel coach, General Roca Railway (see November 30 issue)

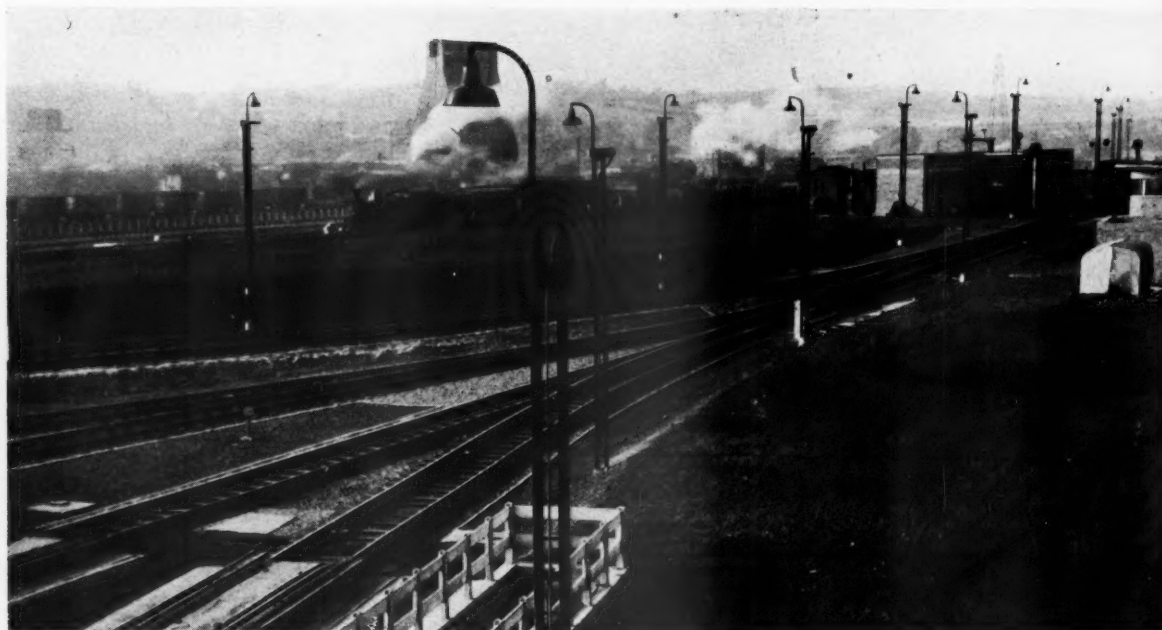


Argentine-built suburban electric motor coach, General Mitre Railway (see November 9 issue)

Modernised Marshalling Yard at Toton—3



Up yard control tower and railbrake area

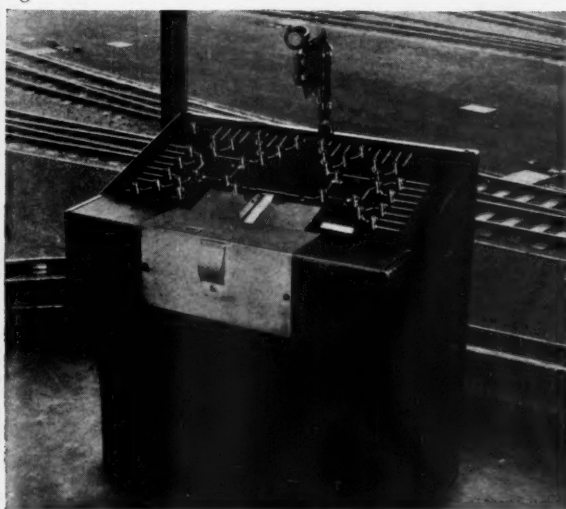


View from control tower looking towards hump, showing portion of railbrakes and subway entrance

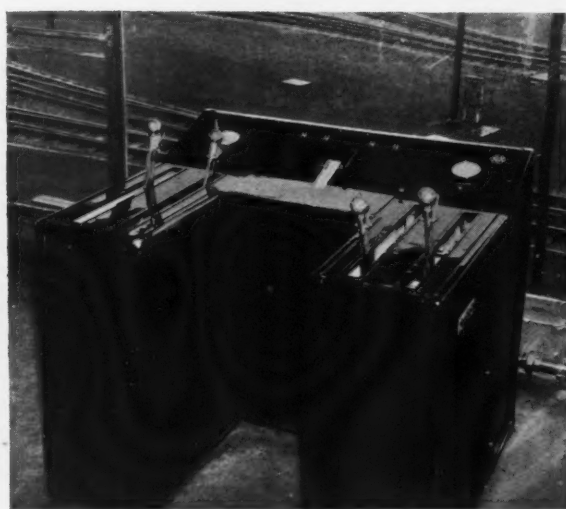
Modernised Marshalling Yard at Toton—3



Control tower operating room, showing point panel on left, and railbrake operator to right, with telephone concentrator on desk



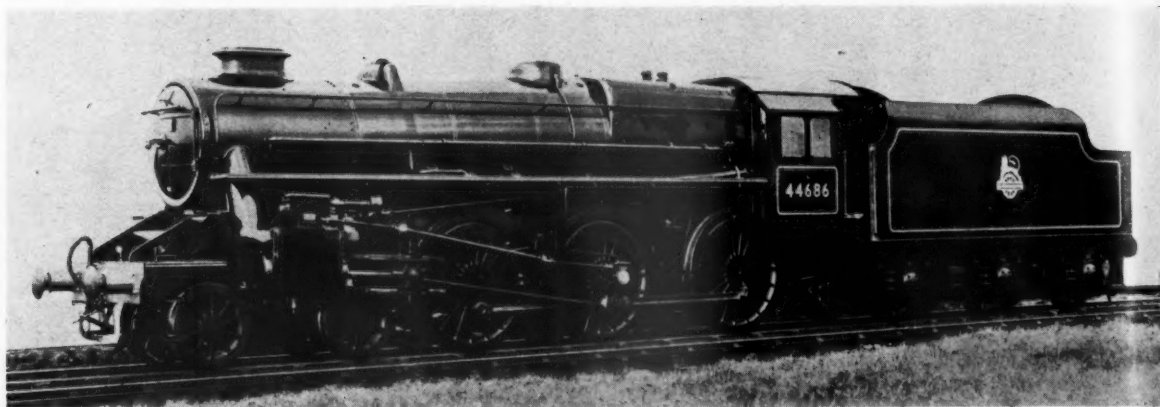
Point operating panel in control tower



Railbrake operating panel in control tower

L.M.R. Locomotives with Improved British-Caprotti Valve Gear

Latest application of external drive ensuring maximum accessibility for erection and servicing



Application to a British Railways "5" class 4-6-0 mixed-traffic locomotive of British-Caprotti poppet valve gear with drive arranged externally and incorporating self-locking worm type reversing gear

THE addition to the motive power of British Railways of new locomotives fitted with British-Caprotti valve gear is the outcome of the successful service on both passenger and fitted freight trains of twenty British-Caprotti locomotives put into traffic in 1947 and referred to in our issue of February 20, 1948. The latter have so far completed over 3,000,000 miles, practically no attention being required to the gear, which has given consistently reliable service.

Following these encouraging results, and to exploit to the full the experience gained, Associated Locomotive Equipment Limited, the designers and suppliers of British-Caprotti valve gear, have introduced further notable improvements developed in close collaboration with Mr. H. G. Ivatt, formerly Chief Mechanical Engineer, London Midland Region. This new design was approved by the Railway Executive for application to some Class 5 locomotives completed recently at Horwich.

This latest version embodies the specialised practical experience of A.L.E. in the application of rotary cam poppet valve gear to locomotives in many countries and is unique in being the first use of the outside drive on a British-Caprotti locomotive. Fundamental improvements incorporated in the design are calculated to give not only better performance, but, what also is of great importance, ease and simplicity in operation and maintenance.

Outside Drive

Outside drive alone has distinct advantages, important among these being that of accessibility, everything being ready to hand both for erection and servicing purposes. The duplex drive transmits rotary motion from the driving axle to the camboxes through universally-jointed shafts and intermediate shafts

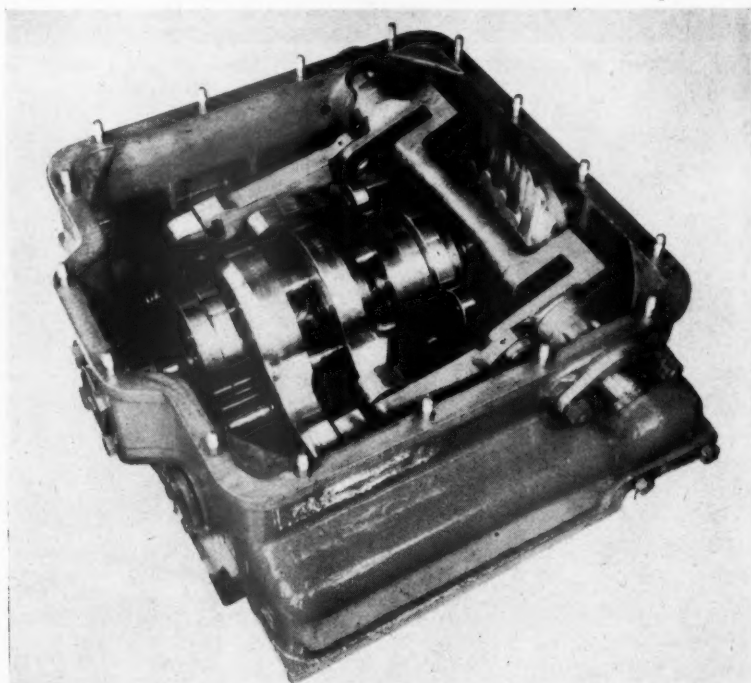
mounted in tubular housings, these being carried on bonded rubber bushes which damp out any impact effect from the track on the driving mechanism.

The Cambox

In the re-design of the new 2CO cambox developed from the well-known 2CUB series, the camshaft assembly is now so housed that there are no external rotary parts, thus effectively sealing against any possible oil leakage. Wide

cam profiles, and all components amply proportioned, ensure long life to a mechanism working in ideal conditions of enclosed oil bath and dust-free operation.

Compared with the earlier practice of driving dogs and catches, the exhaust cams are now direct coupled to cam rods, which system is identical in principle to that long used in the case of the inlet cams. This arrangement has the great advantage of being both simple



Simplified robust design of cambox giving maximum accessibility for servicing



Return crank gearbox details of British-Caprotti valve gear, including worm and worm wheel and adjustable taper roller bearings

in construction as well as ensuring valve events which, as proved in practice, provide maximum power output with good steaming throughout the cut-off range.

The gears—conveniently housed in the cambox—taking the outside drive are duplicate with those of the return crank gearbox and comprise a worm and wormwheel with anti-friction bearings of large capacity.

Every effort has been made to reduce the number of parts and to provide the maximum degree of accessibility for those occasions when the cambox is opened for inspection purposes. As an illustration the tappet cuffs, which formerly were separate, are now made integral with the box itself, and this in turn has been reshaped to conform with modern standards and

presents a neat and pleasing appearance. The return crank gearboxes having high load capacity taper roller bearings can be bench fitted and erected or dismantled as complete units, adequate lubrication for all bearings being ensured by oil bath and the provision of integral oil troughs for feeding the upper worm-shaft bearings. Tubular torque rods with rubber bearings hold the units steady on the return cranks.

Reversing Gear Design

The reversing gear is of particular interest, being of the irreversible worm type which has been introduced to effectively absorb any reactions arising from the poppet valves, thus ensuring precision accuracy and smoothness in operation.

The reversing handwheel and screw are in accordance with British Railways standard practice, so that as far as the driver is concerned, there is no apparent difference where operation of poppet valve geared engines is concerned—apart from the responsiveness of the engine in picking up its load and the noticeable improvement in free running.

With only a minimum of attention between shoppings, this advance in poppet valve gear technique is thus an effective contribution towards achieving still higher locomotive availability. In its application to new locomotives or in the conversion of existing stock, the only special requirement is that of the cylinders themselves, in the design and manufacture of which Associated Locomotive Equipment Limited have a long and varied practical experience.

WASHAWAY ON KENYA-UGANDA LINE.—Abnormally heavy rain has washed away $\frac{1}{4}$ mile of the main line between Nairobi and Mombasa and dislocated train services.

REPORTS ON ROAD PASSENGER TRANSPORT SERVICES.—A summary of the annual reports of the Licensing Authorities for Public Service Vehicles for traffic areas in Great Britain covering the period April 1, 1950, to March 31, 1951, was published on November 22 by H.M. Stationery Office, at 2s. The reports are presented in the form of summaries, extracts, and statistical tables, giving an account of the work for the year in licensing road passenger services, public service vehicles, and the drivers and conductors of these vehicles, and in carrying out other duties laid on the Licensing Authorities by the Road Traffic Acts, 1930-47. Details of the numbers of operators and of public service vehicles are also given. The summary of financial and statistical information relating to undertakings owning more than five vehicles will be included in a separate volume relating to trams, trolley vehicles, and public service vehicles, to be called "Public Road Passenger Transport Statistics." This report will be published early next year.



General assembly of poppet valve gear for a two-cylinder locomotive, showing camboxes operated by return crank gearboxes and shafting, fitted externally to the locomotive frames to provide complete accessibility

South African Railways Staff Housing

Significant efforts during four years to ease housing shortage



House near Vereeniging acquired by a railwayman under the S.A.R. house ownership scheme

THE South African Railways employ more than 105,000 Europeans and about 85,000 non-Europeans, who live and work in varied climatic conditions. Accommodation has to be provided both in outlying districts and in towns. Since April, 1947, 1,949 departmental houses have been built for Europeans at a cost of £3,998,060. They include 120 at Elandsfontein, between Johannesburg and Pretoria, 68 at Crosby (Johannesburg), and 57 at Windhoek (South-West Africa); at Windhoek also 20 twin-unit and 25 triple-unit rondavels have been erected.

Types of Houses

The houses are of 16 types, with rentals to suit each staff group. The three types for European permanent way workers cover an average area of 1,000 sq. ft. each and comprise living room, three bedrooms, kitchen, pantry, bathroom, hot-water system, and outbuildings, including servants' quarters and shower; the present-day cost averages £2,240 each. Six larger houses of different types, covering 1,200 sq. ft. and costing some £2,400, are provided for gangers, shunters, pumpers, firemen, and drivers; some have garages.

Five types of houses are built for stationmasters and other higher-paid staff; they vary in size from about 1,200 to 1,600 sq. ft. and cost between £2,500 and £3,200. Two special types of houses provided in fever areas have doors, windows and verandas screened with gauze to make them mosquito proof. The rental of all these houses is based on floor space, excluding outbuildings and verandas, provided the total rental does not exceed one-sixth of the occupant's earnings.

In addition, a departmental house

ownership scheme was introduced in 1939, by which loans are granted to members of the staff at a low rate of interest to enable them to buy or build their own houses. The loans and interest are repaid in monthly instalments through the medium of the borrower's paysheet and are repayable by him during his period of service with the Administration. No deposit is required, and the property is insured against fire and storm damage under the Departmental Insurance Fund; whilst provision is also made for rates and taxes to be included in the monthly instalment.

As the war broke out soon after the

introduction of the loan scheme, and because of a shortage of labour and materials little progress was made until 1946. Up to March 31, 1951, 3,278 ready-built houses had been acquired by the staff, 430 houses which had been partially paid off were taken over, and 1,762 new houses were built for applicants. The total cost was £10,664,650.

Non-European Accommodation

The housing shortage is as acute among non-European staff, for which 1,275 departmental houses, at a cost of £422,389, have been erected since April, 1947. Three temporary wood and iron structures, each accommodating 60 non-Europeans and costing £1,288, were erected at the new Kazerne, and a hostel with accommodation for 1,000 non-European employees is under construction and will shortly be completed at a total cost of £130,000.

During the past four years, the S.A.R. has built 1,949 departmental houses for Europeans (£3,988,060) and 1,275 departmental houses for non-Europeans (£422,389); 2,109 houses have been acquired by railwaymen under the house ownership scheme at £5,843,035. This is a net increase of 5,333 houses at a cost of £10,250,000 in four years, and does not include hostels or compounds.

RESULT OF U.S.A. LOCOMOTIVE MERGER.—As a result of the merger at the end of 1950 of the Baldwin Locomotive Works with the Lima-Hamilton Corporation, plans are well under way for the transfer of locomotive construction from Lima, Ohio, to Philadelphia, where at the Eddystone plant the Lima specialities are to be dovetailed into the normal Baldwin production.



Part of the railway housing estate at Elandsfontein

RAILWAY NEWS SECTION

PERSONAL

Mr. J. P. F. Ogilvie, Controller of Stores, Rhodesia Railways, has retired and has been succeeded by Mr. A. C. Muir. Mr. F. A. Hill, who has retired as Principal Assistant to the General Manager, has been succeeded by Mr. H. J. N. Collis.

Mr. I. M. Malcolm, A.M.I.C.E., A.M.N.Z.I.E., Resident Civil Engineer at Invercargill, New Zealand Government Railways, who, as recorded in our October 12 issue, has been appointed Inspecting Civil Engineer, began his railway career in 1921, when he joined the Railways Department as a civil engineering cadet at Wellington. In 1937 he was pro-

Mr. Geoffrey W. Morkill, General Manager of the Central Railway of Peru, Peruvian Corporation Limited, whose death we recorded last week, had been General Manager since 1935. He had previously held various railway appointments with the Peruvian Corporation and had been some 30 years in its service. His father, the late Mr. W. L. Morkill, was Representative of the Corporation in Peru between 1907-19.

Mr. C. T. Roberts, B.Sc.(Eng.), M.I.Mech.E., M.I.Loco.E., Locomotive Works Manager, Swindon, Western Region, who, as recorded in our November 23 issue, has been appointed Carriage & Wagon Engineer, Western Region, joined

Engineers in France, and was concerned with standardisation of spare parts for wagons, and laying-out wagon depots.

Mr. J. J. Jarrell, Vice-President (Manufacturing) of the Canadian Locomotive Co. Ltd., has retired, and has been succeeded by Mr. J. F. Weiffenbach, formerly Works Manager.

Mr. A. D. Cochran, Assistant District Operating Superintendent, Leicester, London Midland Region, who, as recorded in our November 9 issue, has been appointed District Operating Superintendent, Gloucester, London Midland Region operating area, began his railway career as a clerk at Mossley Hill, Liverpool,



Mr. I. M. Malcolm

Appointed Inspecting Civil Engineer,
New Zealand Government Railways



Mr. C. T. Roberts

Appointed Carriage & Wagon Engineer,
Western Region



Mr. A. D. Cochran

Appointed District Operating Superintendent,
Gloucester, L.M. Region Operating Area

moted to First Assistant Engineer in the District Engineer's office at Wellington and eight years later became Assistant District Civil Engineer at Dunedin, which position he held until 1948, when he was appointed Resident Civil Engineer at Invercargill.

Mr. F. G. Humphrey has retired as Director of Information, Ministry of Transport, and Mr. S. W. Bainbridge has been appointed Principal Information Officer in charge of the Information Branch (formerly Division) of that Department. Mr. P. W. Darnell, Chief Press Officer, retired at the end of November and Mr. Bainbridge will be assisted as Press Officer by Mr. K. J. Ley.

Mr. A. C. Melanson, Works Manager, Point St. Charles, Canadian National Railways, who, as recorded in our November 2 issue, has been appointed Chief of Motive Power & Car Equipment, is a native of Scoudouc, N.B., and began his career with the company in 1911 as a machinist apprentice in the Mechanical Department at Moncton. He became draughtsman there three years later. Mr. Melanson held various posts in Central and Eastern Canada before being promoted to Works Manager at Point St. Charles in 1944.

the Great Western Railway as a premium apprentice in 1923, and on completion of his training in the workshops in 1928, transferred to the Drawing Office. In 1937 he became Assistant to the Carriage & Wagon Works Manager. A member of the Territorial Army, he served with H.M. Forces from 1939 to 1941, when he was released and returned to Swindon. Mr. Roberts was appointed Carriage & Wagon Works Manager in 1947, and became Locomotive Works Manager a year later.

We regret to record the death on November 30, at the age of 61, of Mr. Charles E. Dee, Chief of the Carriage & Wagon Department of Messrs. Livesey & Henderson, Consulting Engineers. He was educated at Handsworth Grammar School, Birmingham, and Handsworth Technical School, and entered an apprenticeship with the Metropolitan Carriage & Wagon Finance Company, at Saltley, Birmingham, in 1905. Subsequently, he was employed by that firm as a draughtsman, until March, 1914, when he joined Messrs. Livesey, Son & Henderson, as Assistant to the Chief of the Carriage & Wagon Department, Mr. H. B. Monk. Mr. Dee became Chief of the Carriage & Wagon Department on January 1, 1926, and continued to hold that position until his death. During the 1914-18 war he served with the Royal

in February, 1929. Subsequently he was given special training in various departments in the Stoke district and at Liverpool. In 1936 Mr. Cochran became Assistant District Controller, Preston, and later was at Heaton Norris and Stoke in a similar capacity. Eight years later he became Assistant Docks Superintendent, Wyre Dock, and moved to Stoke in 1945 as Assistant Operating Manager. Mr. Cochran was Assistant to the Principal, School of Transport, Derby, from July, 1946, to November, 1948, when he became Assistant District Operating Superintendent, Leicester.

Mr. M. H. L. Lewis has been co-opted to the board of Executive Directors of Crompton Parkinson Limited for a period of six months. Since April, 1950, he has been Assistant to the Works Director (South).

The London Transport Executive has announced the following appointments:—

Mr. J. Morgan, Ratefixing Engineer (Buses & Coaches), as Chief Ratefixer (Buses & Coaches), responsible for all matters appertaining to ratefixing at Chiswick & Aldenham works.

Mr. A. E. Shave, Senior Assistant to Purchasing Officer, as an Officer of the Executive with the title of Supplies Officer.



Elliott [& Fry

Mr. E. C. Cookson

Appointed Assistant Civil Engineer,
Western Region



The late Mr. W. H. Powell

Chairman, Vacuum Brake Co. Ltd.,
1944-51



Dr. A. S. Browne

Appointed Assistant Medical Officer,
Eastern Region

Mr. E. C. Cookson, A.C.G.I., B.Sc. (Eng.), M.I.C.E., M.Inst.T., Assistant Engineer, Permanent Way, Western Region, who, as recorded in our November 30 issue, has been appointed Assistant Civil Engineer, was educated at St. Paul's School, London, and the City & Guilds Engineering College of the Imperial College of Science & Technology, where he graduated as an Associate of the City & Guilds of London Institute and B.Sc. (Eng.). After entering the G.W.R. service in 1923, in the New Works Department of the Office of the Chief Engineer he later became the Assistant Resident Engineer on constructional works in South Wales. In 1925 Mr. Cookson transferred to the Staff of the Divisional Engineer at Gloucester, and returned to the New Works Section at Paddington a year later. He was appointed Assistant to the Divisional Engineer, Shrewsbury, in 1929, became Assistant Divisional Engineer at Plymouth in 1933 and two years later, moved to Paddington in a similar capacity. Mr. Cookson was appointed Divisional Engineer, Newport, in 1940, but, holding a commission in the Transportation Unit, R.E. (S.R.) since its formation in 1925, he was mobilised in 1939 in command of a Railway Construction Company, and subsequently commanded a Railway Construction & Maintenance Group with the rank of Lt.-Colonel, serving overseas with the B.E.F. and being mentioned in despatches. He was released from H.M. Forces for special duties in the Chief Engineer's Office and appointed Assistant to the Chief Engineer in 1941 and in 1945 became Assistant Engineer, Permanent Way. Mr. Cookson is a Miller Prizeman of the Institution of Civil Engineers, and a Member of the Institute of Transport, the Royal Institution of Great Britain and the Société des Ingénieurs Civils de France.

Sir George Binney and Mr. Keith F. Pearson have been appointed to the board of the Vulcan Foundry Limited.

We regret to record the death on December 4, at the age of 65, of Mr. A. E. Hamp, C.M.G., C.B.E., M.I.C.E., General Manager, Tanganyika Government Railways, 1943-46.

We regret to record the death on November 13, at the age of 77, of Mr. W. H. Powell, Chairman of the Vacuum Brake Co. Ltd., and a former Director of Westinghouse Brake & Signal Co. Ltd. He was connected with the railway signalling industry for over 60 years, 50 of which were in the service of the Westinghouse company and its predecessors, having joined McKenzie & Holland Limited, in 1900; previous to this he had served ten years with the Taff Vale Railway. Between 1900-16 he was with McKenzie & Holland Limited, first in the capacity of Resident Representative for Wales and Ireland, and then for Northern England, Scotland and Ireland. In 1916 he was appointed London Manager, but within a year became Works Manager of the Worcester Works. In 1919 he took over the Works management of Saxby & Farmer Limited at Chippenham, and prepared for the transfer there of the Worcester Works. After this had been successfully completed, he went to London in 1922 as General Business Manager, and later became General Manager; in 1935 he was appointed Director. He resigned his General Managership in 1942, and remained on the board until 1950. In 1936, Mr. Powell had been appointed to the board of the Vacuum Brake Co. Ltd. and was made Chairman in 1944, which post he was still holding at the time of his death. Other positions he had held were those of Chairman of W. R. Sykes Interlocking Signal Co. Ltd., Chairman of Rockwell Limited, Director of the Consolidated Signal Co. Ltd., and Director of the Railway Signal Co. Ltd. He was a Member of the Institution of Mechanical Engineers for over 40 years, and of the Institution of Railway Signal Engineers since its incorporation in 1912.

Mr. John W. Porter has been appointed Export Manager of the General Railway Signal Company, U.S.A., with headquarters at Rochester, N.Y.

Mr. W. R. Davies, who will shortly be retiring from the position of Assistant (Salaried Staff & Establishment), Regional Staff Office, London Midland Region, has been appointed Clerk to the Guild of the British Transport Officers' Guild, and will take up his new duties on January 1, 1952.

Dr. A. S. Browne, M.B., Ch.B. (Glasgow), who, as recorded in our November 9 issue, has been appointed Assistant Medical Officer, Eastern Region, British Railways, was educated at Hillhead High School and Glasgow University, where he graduated in the Faculty of Medicine in 1942. Thereafter, he was Resident House Physician at the Royal Hospital for Sick Children and Resident House Surgeon at the Royal Infirmary, both of which are closely associated with the University Medical School. He was commissioned in the Royal Army Medical Corps in July, 1943, and served for over three years; in England until June, 1944, and thereafter in France through Belgium and Holland to Germany with Field Units. Following demobilisation he has had extensive experience and responsibility in general medicine in teaching and non-teaching hospitals in Glasgow and environs, and in Kilmarnock, Ayrshire. Before his appointment Dr. Browne had been engaged in general practice in Ayr.

We regret to record the death on November 26 of Mr. John A. Ross, Joint Managing Director, Ransome & Marles Bearing Co. Ltd. Mr. Ross was appointed Joint General Manager in 1936, a Director of the company the following year, and Joint Managing Director in 1941.

Mr. A. A. Gardiner, General Passenger Traffic Manager of the Canadian National Railways, is retiring on December 23.

Mr. G. D. Lloyd, Assistant Chief Engineer, Humber Ports, Docks & Inland Waterways Executive, has been appointed Civil Engineer, Humber Ports, as from January 1, 1952.

Earl De La Warr has resigned his Directorship of the main board of the Brush Electrical Engineering Co. Ltd., the parent company of the Brush Aboe Group, on his appointment as Postmaster-General. Mr. Ian Thomas Morrow, late of Robson, Morrow & Company, who has been Financial Adviser to the Group, has been appointed to the board of the Brush Electrical Engineering Co. Ltd. He will act as Financial Controller to the Group.

Passenger Charges Scheme, 1951

*Final speech on behalf of the B.T.C. by Sir Trustram Eve:
inquiry concluded after the hearing of evidence on thirty-four days*

Mr. Leon Maclaren, when he continued his submission before the Transport Tribunal on November 28 on behalf of the London County Council and other objectors to the British Transport Commission scheme to increase rail passenger fares, maintained that the uniformity of the standard scale was unsound commercially, whereas the tapered fare, which reduced the cost per mile after five miles, was not only a commercial success but also of great social value. Those who built London Transport so successfully realised that to get people to travel the greater distances it was desirable to taper the fares.

Tapered Fares

Before the introduction of tapered fares people had to live near their work, and this resulted in extensive overcrowding. The L.C.C. had provided subsidised houses away from London, and the ordinary householder now assessed his expenditure as rent and rates *plus* fares. The B.T.C. said that on grounds of equity there could be no reason for sub-standard fares. Those enjoying sub-standard fares, it was claimed, did so at the expense of people making shorter journeys. Mr. Maclaren disputed this and cited the former Southern Railway which operated inexpensive season ticket facilities to the coast with the result that these routes were now heavily used by London workers.

Summing up Mr. Maclaren submitted that the B.T.C. should stabilise its fares at 1.25d. a mile if it was to "stop the rot" of declining traffic. They could do no greater damage than to widen the gap between the coach services and the railways and thereby drive people off the railways to other forms of transport. The monthly returns outside London were too high and should be reduced.

On November 29, Mr. H. C. Willig, forty-first and last objector to the scheme, was heard. Mr. Willig, representing the West Ham Trades Council which has a 27,000 membership, said that because of heavy war damage, numerous West Ham workers had to live outside the borough, sometimes as far away as Southend, and the total cost in fares was an intolerable hardship today. Although the Stratford employment committee had 53 unemployed persons on its books it had 1,588 vacancies. This only affected one-half of West Ham.

Labour could only be supplied from outside the borough to fill these vacancies, and a further increase in fares would add to the already difficult task of persuading workers to obtain employment in the borough. The proposed increase would be much nearer the "last straw" and would have a much greater effect to the detriment of the B.T.C. Fares structures should not be such as to act as a deterrent to travel. Pleading for "black-coat" workers Mr. Willig urged that early morning fares should be extended to 9 a.m. so that they could also enjoy this concession.

Answers to Objectors

Sir Malcolm Trustram Eve, for the B.T.C., in making his final statement on December 3, said that the B.T.C. had been glad of this opportunity of making its true financial position and the reasons for it better known. They did not wish to make more than a few alterations to the original submissions as a result of the objections heard in recent weeks.

When recalling criticism of the proposals Sir Trustram Eve first referred to a suggestion that the London area conversion from trams to buses had been badly timed. While refuting this claim he maintained that the trams were losing over £1,000,000 a year. Moreover, £500,000 would have been required for normal maintenance had they been retained. Conversion to buses reduced by about £500,000 the annual working expenses and they would not have the abnormal maintenance charge. A number of objectors had cancelled themselves out and an example of this was the case of early morning fares. Although one objector had pleaded for their extension another had called for their abolition.

Almost every point of view represented in the London area had had a full chance of being heard, said Sir Trustram Eve, but the outside Londoners were very rare, and Scotland was not there at all. County boroughs outside London had not objected except on purely local points. Although numerous examples of individual hardship which would be caused by approval of the application had been presented, these could not be taken into account, as only general hardship could affect the scheme.

Family Budget

Those family budgets which had been quoted were not entirely fair, because they dealt mainly with the family with only one bread-winner, whereas it had been shown that on the average there were in London 1.4 workers per household. Also, accent was on travel to work for distances of over five miles, though 80 per cent. of workers travelled less distance than this. For a journey over three miles at early morning fares a passenger paid less than he did in 1950.

Moreover, objectors had contended that 85 per cent. of the travelling public had bicycles, which they would use instead of public transport if fares rose, but he put the figure of 12 per cent. Also it was incorrect to accept the statement that early morning ticket users—about 11.6 per cent. of the whole—were to pay 17.6 per cent. of the increased yield. Assessed as a net figure, this was right, but on gross figures the early morning fares would produce 28.9 per cent., and the ordinary fares would produce 24.5 per cent. of the increase. The railways were lower in real value than before the war. For the London area the B.T.C. target was £84,800,000 for working expenses and £6,000,000 for central charges, totalling £90,800,000, while the yield at £91,300,000 would leave £500,000 for reserves.

Central Charges

On the method of apportioning central charges, Sir Trustram Eve said that there were at least seven ways in which this could be done. They were, first, on the basis of gross book value of fixed assets, which could be calculated by taking displacement account allocations as in 1949, and second, as in 1950. The next method was to take the net book value—again differentiating between displacement accounts of 1949 and 1950—while other methods were based on the number of staff, gross receipts of the various activities, or working expenses. These calculations gave widely differing results except in the case of London Transport, which was a "mere fluke" as it comprised both road and rail undertakings. He urged the

Tribunal not to calculate these charges on an arithmetical basis, but rather to take the commercial policy which had been outlined in evidence by Sir Reginald Wilson, Comptroller, B.T.C.

Later, Sir Trustram Eve dealt with the sub-standard fare, saying that to clean this matter up the B.T.C. had suggested increases of 50 per cent. for season tickets and 75 per cent. for other sub-standard fares. He thought it unfortunate that another scheme would be required to completely settle this point and suggested that the Tribunal might consider restriction for a given time.

To those objectors who had proposed extensions of early morning fares he would say that these fares were already being subsidised to the extent of £3 to £4 million a year. Shift workers' tickets could not be applied to a larger field owing to the difficulties of deciding who should get the concession.

Importance of Flexibility

Flexibility for charging outside London and in apportioning central charges were the two most important points to be considered—coming far above all questions of revenue—for one could not commercially run such a large undertaking unless they accepted the principle that they changed the basis of allocating central charges from time to time. Flexibility in charging was required in the interest of the B.T.C. and of its customers.

They were asking for over £22 million on the scheme, and if they were entitled to it now, surely they were entitled to it a long time ago. He attached very great importance to anything that could be done to help the B.T.C. get the money that was due at the time it was due, and he suggested that it would be far better for the travelling public to pay up immediately rather than pay far more later on.

Mr. Hubert Hull, President of the Tribunal, formally closed the hearing.

NORTH EASTERN REGION BRANCH LINE CLOSED.—Because the passenger train service on the Waterhouses branch of the North Eastern Region has been run at a loss this service was withdrawn on October 27. Stations affected are Ushaw Moor and Waterhouses. Parcels traffic is still accepted at these stations and is collected and delivered by Railway Executive road vehicles operating from a railhead. Alternative bus services for passengers are provided. There is no change in the method of dealing with freight traffic.

LATE SEASON VISITORS FROM U.S.A.—Tourist traffic from the United States, which brought a record number of American visitors to Britain during August and September, continued into October. It is announced by the British Travel & Holidays Association that 8,466 American visitors arrived during the month and that this figure represents an increase of 13 per cent. over October last year. The total of U.S.A. visitors for January to October was 117,702 as compared with 116,267 for the same period of 1950 and is a welcome reversal of the earlier trend towards a decrease owing to international tension. Tourist traffic from all sources in October totalled 42,025 or 4 per cent. more than in October last year.

Ministry of Transport Accident Report

*Throstle Nest East Junction, London Midland
Region, British Railways: December 27, 1950*

Colonel D. McMullen, Inspecting Officer of Railways, Ministry of Transport, inquired into the accident which occurred at 7.44 a.m. on December 27, 1950, at Throstle Nest East Junction, near Manchester, when the 7.35 a.m. train, Manchester Central to Liverpool, consisting of six bogie coaches drawn by a "2P" class 4-4-0 tender engine, travelling at about 40 m.p.h., ran into a "J.11" class 0-6-0 engine standing at the home signals.

There was considerable damage to both engines, which continued to run forward for about 360 yd. The train engine was completely derailed and there was telescoping between the first two coaches, wrecking nine compartments. The fireman of the light engine and a passenger were fatally injured. Four passengers and one railway servant were seriously injured.

Assistance was obtained as speedily as possible and bus services introduced while the lines were blocked. Normal working was resumed at 3.45 p.m. Dawn was just breaking; the weather was clear, but the rails wet. The light engine crew had failed to carry out Rule 55, and the two signalmen at the box in rear, Cornbrook West, who had not seen the engine pass, mistakenly believed it to have been cancelled from Manchester Central. This led to all signals being cleared irregularly for the passenger train.

The diagram on page 639 shows the lines, signals, and certain other details essential to an understanding of the case. From Manchester Central to Cornbrook West there is continuous track circuiting, and trains are signalled by describers without block telegraph. (There are emergency block bells on this section.) Ordinary block working obtains from that point.

Operation of Train Describers

On a train being described from Manchester Central to Cornbrook West a flashing light appears on the receiver in the latter box and a buzzer sounds continuously, which is silenced by operating a plunger. The light then becomes steady. When track circuit 12135 (see plan) becomes occupied a short "train entering section" buzz sounds at Cornbrook West and an "in section" light replaces the "leaving" light. The description is cancelled and the light extinguished without audible warning when track circuit 12132 has been occupied and cleared.

To cancel a description Manchester Central operates a key to extinguish the "leaving" light; no acknowledgment by Cornbrook West is required, but a short buzz sounds there, exactly similar to that indicating "entering section." The tones of the buzzers for the two down instruments there are not very different. After "train entering section" is received about 10 to 14 sec. usually elapse before the train concerned reaches track circuit 12134, the first one indicated at Cornbrook West, and the light normally becomes extinguished 2 to 3 min. later.

Evidence

The light engine driver said he travelled from Deansgate Goods Depot at normal speed without hurry, and stopped at Throstle Nest East home signals. After about 2 min., when the fireman was about to carry out Rule 55, the signal for the main line to Liverpool was pulled off, and as he had to travel to the branch he

sounded four short blasts for the correct signal and told the fireman to wait. Nothing happened, and in about 1 or 1½ min. he whistled again, and once more there was no response. After a further similar interval he released the brake, intending to drop down to the box, when the collision occurred. He did not see the approaching train, and thought he did not stand more than 2 min. before whistling nor more than 5 min. before deciding to go forward. He understood Rule 55 and his fireman was a man "keen to carry it out." He could not remember having to apply it at that signal before. A Manchester-Derby train passed on the down "A" line soon after he stopped. A guard, who was seriously injured, was on the engine, but there was no general conversation with him or the fireman.

The driver of the passenger train saw Cornbrook West outer home at green and closed the regulator, giving steam again on sighting the inner home and Throstle Nest distant at clear. There was usually difficulty in picking out Throstle Nest East home signals as they are rather high and located away from the line. Looking ahead again he saw a tail light, which he thought to be on the down "A" line, and only realised it was not when three or four coach lengths from it. Speed was reduced slightly before the impact. Other evidence confirmed these statements.

The signalman at Manchester Central said that the light engine was described immediately the plunger at the starting signal for the goods yard was operated and left at 7.23/24 a.m. The Derby train on the "A" line was described at that time. At 7.35 the Liverpool train on the "B" line was described. At about 7.47 Cornbrook West telephoned to say the up and down "B" lines were blocked, and then asked whether the light engine had been cancelled, evidently thinking it had, and was told it had not, neither had any other train.

The describers worked well and gave no trouble. There were a few cases of lamp failure. The sound of the buzzers was sometimes drowned by external noises, and they would then verify the position on the telephone. Otherwise they could remember no misunderstanding taking place during the several years they had worked in the box.

There are two signalmen and a train recorder at Cornbrook West, but the recorder had not reported for duty. Their combined evidence was to the effect that the describing of the light engine and of the "A" line train was within their memory, that they heard the buzzer sound, and that there was then no light on the "B" line describer after they did so. They did not recollect hearing any "train entering section" buzz for the train on the "A" line and both thought the engine had been cancelled.

The track on "B" line showed clear and neither had seen an engine pass. They would have done had the stabling line not been occupied. With the windows shut they heard no whistle, and one signalman thought he probably would not have paid attention to it if he had, as there was so much whistling in the area, but the other man considered that had he heard a code whistle from near the starting signal it might have raised a doubt in his mind regarding the cancellation of the engine.

These men also said the describers occasionally gave trouble and lamps sometimes failed, but neither suggested that in this case the describers as well as the track circuits had failed simultaneously.

When it was thought that the engine had been cancelled one of the signalmen put his signals back to danger and cancelled it forward, but did not notice the indication given by the outer home repeater, which must in fact already have been showing red when he replaced its lever to normal.

The signalmen at Throstle Nest East received the cancelling signal from Cornbrook West and cleared no signals for the engine, but on accepting the passenger train and getting it accepted forward cleared all signals for it. Neither heard the engine whistle and would have paid no attention to it if he had.

A shunter in the sidings opposite that box heard the code whistle, which was repeated 2 or 3 min. later when he saw steam from the engine's safety valve over some coaches. He saw also that the signals to Liverpool were off and later heard the collision. The train describers and track circuits were all found to be in order after the accident.

Inspecting Officer's Conclusions

Unfortunately the only records of block signals for the light engine were in the Throstle Nest register, but after considering these and all other related facts in the light of the evidence Colonel McMullen concluded that a coincidence of movements between the train on line "A" and the engine on line "B" had resulted in "train entering section" for the former being taken as the cancelling signal for the latter. The "entering section" buzz for the light engine must have been missed entirely.

There was no doubt that the engine must have been standing for 16 min. before the collision. The driver seriously misjudged the time and there is no alternative but to place the main responsibility on him for not carrying out Rule 55. His statement that he whistled twice is accepted, but he himself said that the first time was when the main-line signal was cleared, at 7.38 a.m.; he must then have been standing for at least 10 min. A man of 48, 31 years in railway service, and a driver for ten, he has a clear record.

The signalmen at Cornbrook West also must bear some responsibility. They are not criticised for missing the "train entering section" buzz or failing to hear the whistling, which tests confirmed could be done. Their mistake lay in jumping to the conclusion that a cancellation had been sent and not telephoning to confirm, a serious error for experienced men. Had the red indication of the outer home repeater been noticed when replacing the lever the situation might have been saved. Both men have clear records and their evidence was straightforward.

The train driver could not have avoided the collision, nor could he tell until close to it that the tail light was on his own line.

Remarks and Recommendations

A check at Throstle Nest disclosed that during December, 1950, Rule 55 was carried out only on one of the ten occasions that required it, and steps have now been taken to ensure obedience to it. Its importance cannot be over-stressed. The results have already been satisfactory.

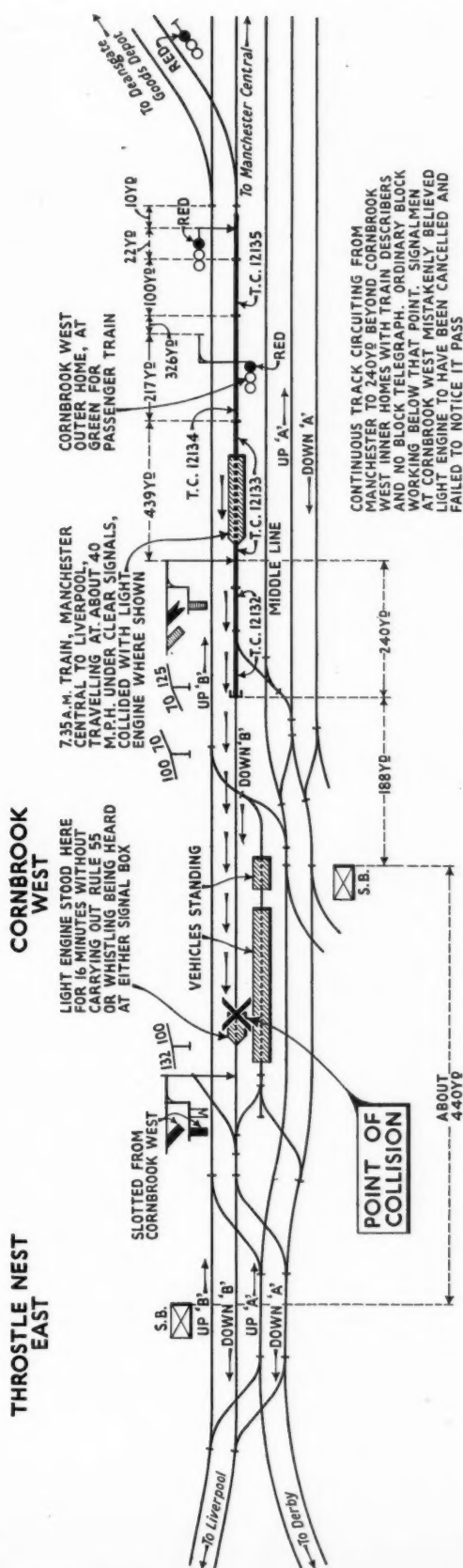


Diagram illustrating circumstances of accident at Throstle Nest East Junction, London Midland Region. December 27, 1950

An undesirable feature of the describers is that cancellation is performed by the dispatching signalman only. At the receiving instrument the only difference between "entering section" and cancellation is that in the latter case no "in section" lamp is illuminated; in both, the "leaving" lamp is extinguished and the same short audible warning given. It is surprising that this arrangement has not previously caused misunderstandings at least.

Maximum security is obtained by making cancellation co-operative, but this is difficult with these particular instruments. Colonel McMullen was informed that it would be comparatively simple to rearrange the circuits to require the receiving man to acknowledge any cancellation, and he recommends that this be done. It would, he considers, be advantageous to have greater distinction between the tones of the buzzers of the receiving instruments.

From Cornbrook westwards safety is dependent on simple block working only, and track circuit up to Throstle Nest home signals would have prevented this accident. As the view of the busy down "B" line is frequently obstructed it is recommended to provide it. Traffic intensity at this particular point suggests that consideration should be given to the further extension of track circuiting and the provision of modern block controls.

London Midland Region Staff Conferences

At Belle Vue, Manchester, on November 6 and 7, Mr. J. W. Watkins, Chief Regional Officer, London Midland Region, held another of his periodic informal conferences with the staff. On the first day 260 representatives from stations and depots within approximately 20 miles of Manchester attended, and on the second day another 275 were present. They included representatives from the Eastern Region penetrating lines.

Mr. C. Mapp, moving a vote of thanks at the end of the first meeting, said that there were two underlying principles to be borne in mind, first, there was the problem of deciding where centralisation from above ceased and local autonomy took over; there was a good deal of feeling on the staff side in regard to local autonomy, and both management and staff had to realise that there must be some easing of control from above and some autonomy from below. Second, both sides must appreciate that in these early days of consultation they had a lot to learn.

Value of Personal Contact

Mr. W. Hayter, District Organiser, N.U.R., seconding, said that these meetings demonstrated that the management as a whole, and that of the London Midland Region in particular, appreciated the necessity for close personal contact with the staff. He then referred to the suggestions which had been made to decentralise power if possible from London to the districts and give the L.D.C. the opportunity to exercise more power. If this was done, there would be a far greater interest shown, and the work of the L.D.C. would be much improved.

In his replies Mr. Watkins praised those who gave so much time to L.D.C. work and said they all obviously had the railways at heart. There were bound to be differences between staff and the management from time to time, but if both sides could sit down and discuss those differences in good heart, then a lot could

be done. On the question of more authority being given at lower levels, he considered that everybody ought to try to bring this about, but it had to be done gradually. The nationalised system was, after all, very young, but if all played their part and remembered always that the railways existed to transport passengers and goods efficiently and economically, there was no doubt that full success would come.

Mr. Watkins concluded by saying that the railways were at present passing through a difficult period and were not showing very satisfactory net revenue; nevertheless, the movement of traffic was going better than was expected. In the winter ahead management and staff together were faced by a rough prospect, and it was his intention to see that the men in the yards and depots were kept advised of the traffic situation, an arrangement which the Railway Executive was most anxious should be carried out.

Parliamentary Notes

Losses on Railways

Mr. Henry Hynd (Accrington—Lab.) on the motion for the adjournment on November 20 raised the question of the thefts of goods on the railways and the aspersions on the honesty of railwaymen, who resented some of the remarks recently made.

Some statements, added Mr. Hynd, assumed that thefts were committed by railwaymen of which there was no proof; other people than railwaymen stole goods on the railways. He claimed that most railwaymen did their duty very creditably. They deplored the thefts, and their unions had deprecated them. There was a very fine *esprit de corps* among railwaymen. There was only a small number of them who could possibly be called dishonest, although they had been amongst the worst-paid workers in the country.

Pilfering Losses Not Heavy

Official figures, Mr. Hynd said, showed that the total value of goods for which claims had been paid in respect of loss or theft on the railways had fallen over the last three years, though because of the incidence of higher prices and purchase tax, if the amount stolen had remained the same, the value would have increased. In 1947, before nationalisation, the amount of theft was greater than the following year. The amount of claims paid for goods lost, stolen, or pilfered, was only about one per cent. of total receipts.

Mr. Hynd stressed the temptation to theft of valuable goods lying about in goods sheds. Among the railway staff handling them, he pointed out, might be temporary staff—brought in because of the railway staff shortage, which was caused by low wages. Theft in, say, transfer points was easy. The public accept stories of theft on the railways with a sense of proportion.

Mr. J. A. Sparks (Acton—Lab.) said they must not confuse theft with loss. At the periodic salvage sales, there was a mass of stuff which had accumulated—lost traffic, and traffic without labels, not due at all to pilfering. But claims were made for that lost traffic and paid by the railways. The total amount paid by the railways in 1950 was 31 per cent. down on 1945, despite the rise in commodity prices reflected in increased claims. Packing of goods was much inferior today

compared with before the war. The public must help to reduce losses by ensuring that goods were properly packed.

Mr. J. S. Maclay (Minister of Transport & Civil Aviation) said he was in very substantial agreement with what had been said. He emphasised the importance of care in packaging and addressing. He yielded to no one in his belief that the railwaymen were as fine a cross-section of British life as in any trade, industry, or occupation.

General Decline in Honesty

Since the war, Mr. Maclay continued, the standards of general honesty seemed to have fallen. The railway service could not be expected to be exempt from that, and the figures quoted, of claims paid, while showing a decline, were nevertheless serious. The railways were one of the few industries in which comprehensive statistics were available. Pilferage could go on of goods which were under the care of the railways, but the inspiration might well come from people unconnected with them. It was impossible to disentangle losses and thefts.

In 1946 the total figure was £2,441,000, in 1948, £2,778,000, in 1949, £1,728,000, and in 1950, £1,406,000; but in 1938 it was only £180,462. The first nine months of 1951 showed a rise against the same months of last year, which could not be accounted for by an increase in values. There was evidence that organised gangs, operating from outside, were largely responsible; textiles and tobacco were most often stolen.

Campaign Against Pilferage

With the full co-operation of the unions, said Mr. Maclay, a constant campaign was being waged. Posters were used extensively and articles published in staff magazines, and the subject was discussed at local departmental committees. In addition, the railway police were co-operating closely with the civil police. The most strenuous efforts on the part of everyone concerned were needed. The reputation of railwaymen had always been a matter of great pride to them and to the nation. They could help in overcoming this. They had been doing it in years past, they could still help and he knew they would.

Mr. Geoffrey Wilson (Truro—C.) said that from his own experience in the legal department of a railway company, he would confirm the remarks made that these thefts were by no means always committed by railway servants; and when they were, by no means only by the permanent staff. At Christmas and other rush periods additional staff was taken on, and it was hard to prevent the agents of thieves being planted. He would remember occasions when people were deliberately put there by receivers as agents to act for railway thieves.

Railway Police Reorganisation

Since nationalisation, Mr. Wilson added, the railway police had been reorganised. He wondered whether that reorganisation had been effective, and whether it had been on the right lines.

As he understood it, the railway police Regions now coincided with those of the Metropolitan Police and the county areas and paid no attention to railway boundaries, and the divisions of responsibility of railway police did not always coincide with railway routes. He wondered whether that detracted from the efficiency of the railway police, who formerly did their job very well.

Questions in Parliament

Steel Supplies

Mr. Joseph Slater (Sedgefield—Lab.) on November 26 asked the Minister of Supply to what extent the "M"-form system in allocation of steel to Government departments was still in force.

Mr. Duncan Sandys: The "M"-form system is at present used only for sheet steel and tinplate. Under an Order I made last week a similar scheme will be introduced next February for other forms of steel.

Mr. Slater: There has been much criticism of that form of allocation; and is it adequate to offset any form of abuse?

Mr. Sandys: I am not saying it is water-tight. The industry was consulted and, on balance, came to the conclusion that this was the best scheme in the circumstances.

Railway Freight Charges

Viscount Hinchinbrooke (South Dorset—C.) on November 30 asked the Minister of Transport what applications he had received from the B.T.C. for authorisation of an increase in railway freight charges.

Mr. J. S. Maclay in a written answer stated: The Commission has drawn my attention to the actual and prospective rises in their costs due to increases in wage rates and in prices. It has applied for my authority, under Section 82 of the Transport Act, to increase existing railway freight charges by 10 per cent., subject generally to a maximum increase of 10s. a ton, charges for small parcels by goods train by about 20, charges for returned empties by 50, and dock and canal charges by 10 per cent. As required by the Act, I have sought the advice of the Permanent Members of the Transport Tribunal.

Accidents at Newcastle-on-Tyne

Miss Irene Ward (Tynemouth—C.) on November 12 asked the Minister of Transport what inquiries had been made by his inspectors into accidents at Newcastle Central in the last six months.

Mr. J. S. Maclay: One formal inquiry into a train accident at Newcastle Central has been held, into the collision between two electric passenger trains on August 17. I have not yet received the report by the Chief Inspecting Officer of Railways. In the period in question inquiries were held into two accidents involving injuries to railway servants. In the report on one inquiry a recommendation was made on stricter adherence to a safety rule, and in the other no recommendation was made.

Miss Ward: In view of the general public disquiet at railway accidents will the Minister consider issuing a White Paper?

Mr. Maclay: That proposal would require very careful thought, as a matter of general principle. I will certainly consider what Miss Ward has said.

Coal Wagons

Major Peter Roberts (Heeley, Sheffield—C.) on November 19 asked the Minister of Transport, whether he would inquire of the B.T.C. what was the number of wagons practically available for moving coal from pitheads, and what was the estimate of the number required to do that effectively without delay to pit production.

Mr. J. S. Maclay: The B.T.C. states that some 535,000 wagons, of varying capacity, are immediately available for movement of mineral traffic, excluding iron ore. An average of 315,000 wagons a week is forwarded for coal class traffic, which includes coke. The Commission considers the wagon fleet should suffice to avoid delay in pit

production, provided there is enough staff and the weather is not unduly severe.

Mr. A. C. Manuel (Central Ayrshire—Lab.): Would the Minister inform the House as to the siding accommodation at collieries for the storage of wagons so that they will be accessible for coal?

Mr. Maclay: I should like to see that question on the Order Paper.

Morden Underground Station

Captain R. E. D. Ryder (Merton & Morden—C.) on November 12 asked the Minister of Transport if his attention had been drawn to dangerous overcrowding outside Morden underground station during rush hours owing to the inadequate facilities for dispersal by bus.

Mr. J. S. Maclay: This matter is under discussion between the local authority, the London Transport Executive, my Divisional Road Engineer, and other authorities. I will inform Captain Ryder of the result as soon as possible.

Fares for Hospital Visitors

Mr. W. A. Steward (Woolwich West—C.) on November 15 asked the Minister of Health if he would consult with the B.T.C. on the possibility of cheap fares for those visiting relatives in hospital where the patient was transferred some distance away from his residence.

Mr. Harry Crookshank: Arrangements have already been made for cheap fares to most hospitals where patients are expected to stay long; I am not prepared at this stage to ask the B.T.C. to extend the scope of these.

Steel for Railway Purposes

Major Peter Roberts (Heeley, Sheffield—Nat. Lib.—Con.) on November 13 asked the President of the Board of Trade whether, until the international position was clarified, he would give instructions to hold up big orders from Persia for steel for railways, vitally needed elsewhere.

Mr. Henry Hopkinson (Secretary for Overseas Trade) stated in a written answer: The licences given for export to Persia of railway track equipment, including rails, sleepers and fastenings, were revoked on September 10, and cargoes already *en route* to Persia were requisitioned. No further licences for export of these goods to Persia are being issued for the present.

Staff & Labour Matters

Railway Shopmen's Claim

A meeting of the Railway Shopmen's Council took place in London on December 5 to consider the claim of railway shopmen for a substantial pay increase. At an earlier meeting of the council the Railway Executive had offered certain increases which were not made public. This offer was rejected at a meeting of representatives of the N.U.R. and the C.S.E.U. held on November 28, and it was decided to press for the terms of the previous claim to be met, for a substantial increase.

Since the offer of the Railway Executive was made there have been two developments. Firstly, railway salaried and conciliation staff have been granted an increase of 8 per cent. Secondly, the C.S.E.U. has agreed to accept the offer made by the Federation of Engineering & Allied Employers to the pay of engineering workers by 11s. a week. Although regard is paid to outside engineering rates in considering the rates of pay of railway shopmen, it has been customary to deal with them by analogy with other railway workers.

Contracts & Tenders

The Crown Agents for the Colonies have placed an order with the Gloucester Railway Carriage & Wagon Co. Ltd., for twelve four-wheel horse-box underframes for the East African Railways & Harbours.

The Nyasaland Railways have recently placed the following contracts:—

Cambrian Wagon Works Limited: 30 bogie high-side wagons.

Hurst, Nelson & Co. Ltd.: five bogie tank wagons.

G. R. Turner Limited: 30 bogie steel covered wagons.

An order for 20 underframes and bogies for third class carriages has recently been placed with the Metropolitan-Cammell Carriage & Wagon Co. Ltd., by the Crown Agents for the Colonies for the Ceylon Government Railway.

The Rhodesia Railways have placed the following contracts:—

British Rail Makers: 450 miles of B.S.80R. flat-bottom rails.

British Sleeper Makers: 450 miles of sleepers for B.S.80R. flat-bottom rails.

Orders for the appropriate fastenings to be used with the above sleepers and rails have been placed as follows:—

Bayliss, Jones & Bayliss Limited: Rail fastenings.

Guest Keen & Nettlefolds (Midlands) Limited: Sleeper fastenings.

The order for rails and fishplates amounts to approximately 58,350 tons and that for sleepers to about 58,100 tons.

The Westinghouse Brake & Signal Co. Ltd., has recently received orders for automatic vacuum brake equipment up to a total of 922 sets. The equipment is for various types of wagons being built for the Western Australian Government Railways.

The Board of Trade Special Register Information Service states that the British Consul General at Lourenco Marques has reported a call for tenders by the Directorate of Ports, Railways and Transport for the following:—

Material, wt. (a)	30 kg.	40 kg.	44-64 kg.
For delivery in Lourenco Marques—			
Rails	500 (b)	—	3,847 (c)
Fishplates ...	1,000	—	7,694
Fishbolts (d)	4,500	2,200	23,082
Points, sets (e)	—	—	—
Angle 1 in 9	35R., 16L.	3R., 3L.	4R., 2L.
Angle 1 in 11	9R.	2R., 1L.	6R., 3L.
Also 3,000 fishbolts (d) for 22-5 kg. material, and 35,500 galvanised coachscrews			
For delivery in Inhambane—			
Rails	920 (b)	—	—
Fishplates ...	1,840	—	—
Fishbolts (d)	3,680	—	—
For delivery in Beira—			
Rails	3,334 (b)	—	—
Fishplates ...	8,826	120	—
Fishbolts (d)	17,956	350	—
Points, sets:	—	—	—
Angle 1 in 8	3R., 3L.	—	—
Also 140,000 galvanised coachscrews			

(a) Weight in kg. per m.; (b) low profile, 12 m. long; (c) 24 m. long; (d) with spring washers; (e) points complete with all material within their length and manganese steel monobloc crossings; R. = right- and L. = left-hand

Tenders should reach the Directorate of Port, Railway & Transport Services, 2nd Seccao dos Armazens Gerais, Lourenco Marques, before 3 p.m. on December 27. A copy of the tender documents and drawings is available for inspection by United Kingdom manufacturers at the Board of Trade, Commercial Relations & Exports Department, S.W.1. Other copies of the specifications and drawings, with three exceptions, are available for loan to U.K. manufacturers in order of written application to the Department; reference C.R.E. (I.B.) 74555/51 should be quoted.

Notes and News

Vacancy for a Railway Rolling Stock Draughtsman.—A firm of Consulting Engineers in London have a vacancy for a rolling stock draughtsman. See Official Notices on page 643.

Senior Draughtsman Required.—A senior draughtsman with experience of railway and wharf work is required by a firm of London consulting engineers. See Official Notices on page 643.

Institution of Locomotive Engineers.—At a meeting of the Institution of Locomotive Engineers to be held at the Institution of Mechanical Engineers, Storey's Gate, S.W.1, at 5.30 p.m. on December 19, Mr. D. W. Peacock will read a paper on "Railway Wind Tunnel Work."

Vacancies in the New Zealand Government Railways.—There are vacancies in the New Zealand Government Railways for the following technical staff:—Designers of points and crossings; structural engineers; structural draughtsmen; architects and architectural draughtsmen; civil engineering draughtsmen; engineers' assistants; technical assistants; plant engineers. See Official Notices on page 643.

"Simplon Orient Express" Diverted.—As the result of the landslide blocking the line near the Italian portal of the Simplon Tunnel, the "Simplon Orient Express" is being diverted *via* Modane, the Mont Cenis Tunnel, and Turin. Shortly after the landslide, the express was diverted *via* the Gotthard, and latterly passengers have been conveyed by road between Varzo and Domodossola, as recorded in our issue of November 23. The normal route *via* Vallorbe, Lausanne, and Brigue is not expected to be resumed before February.

Christmas Train Services.—The Railway Executive announces the following travel arrangements in England and Wales during the Christmas holidays: Christmas Eve, normal weekday service modified as necessary; Christmas Day, Sunday service modified as necessary; Boxing Day, normal weekday service (Sunday service in Southern Region only) with additional trains in the evening. Restaurant and buffet cars and reserved seats will be available in most long-distance trains. Where cheap-day tickets are normally issued after certain hours on Tuesdays and Wednesdays they will be issued without restriction on Christmas Day and Boxing Day. The peak-hour restriction on "wintertime" cheap tickets will also be lifted in most cases on these days, and the usual day return tickets issued in London. The only steamship services for which sailing tickets will be necessary are those from Holyhead to Dun Laoghaire on December 21, 22, 23, and 24. Sailing tickets will not be

required on any route from Ireland. Normal services will operate in Scotland, but there will be additional services to and from England.

Italian Workers for London Midland Region.—Nearly 200 Italians have arrived in Britain for training as platelayers by the London Midland Region; they are beginning work in the Manchester and Birmingham districts. L.M.R. permanent way men who learnt Italian during the war, work with the Italians for the first few weeks as instructors and to help them to settle down in their new environment.

North Eastern Region Experimental Winter Fares.—As from December 3 an improved train service has operated on the Newcastle-Consett branch of the North Eastern Region, British Railways, and an experimental winter cheap fare of 2s. has been introduced between Newcastle and Blackhill, Consett, and Leadgate. There are new morning, evening, Wednesday, and Saturday services between Newcastle and Leadgate, which will result in a saving of time in travel and should be attractive to business people.

New G.E.C. Traction Control Shop at Witton.—In the course of changes at the Witton Works of the General Electric Co. Ltd., the traction control shop has been transferred to a larger site. Important overseas railway contracts being executed in the new shop include equipment for 3,000-V., 3,030-h.p. locomotives for the South African Railways. The mechanical parts of these locomotives are being built by the North British Locomotive Co. Ltd. In the accompanying illustration continuous strip type resistances for the South African locomotives are seen on the floor in the foreground, and wire-wound bobbin type resistances for 3,000-V. auxiliaries beyond. The nearer contactors are a 1,500-V. auxiliary type for the same locomotives, and the fitter in the middle of the illustration is working on 3,000 V. main contactors, one of which is seen completely assembled, with arc-chute in position. A

further batch of 1,500 V. auxiliary contactors is receiving finishing touches in the background. Another overseas traction contract in hand at Witton is a repeat order from the Estoril Railway, Portugal, for nine 1,500 V. d.c. motor coaches, four driving trailers and one trailer. An order recently completed has been for the electrical equipment of eight diesel-electric shunting locomotives for the Ceylon Government Railway designed in association with the North British Locomotive Co. Ltd., the builders of the mechanical parts.

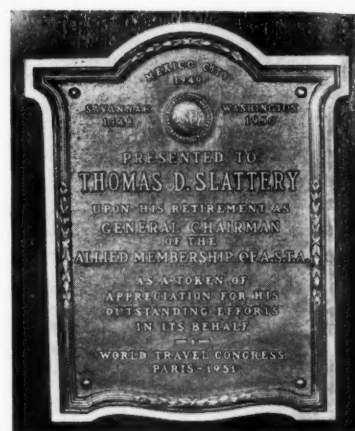
Railway Students' Association.—Mr. F. G. Maxwell, Operating Manager (Railways), London Transport Executive, read a paper entitled "London's Next Tube" at a meeting of the Railway Students' Association, London School of Economics & Political Science, on December 5. The chair was taken by Mr. J. W. Watkins, Chief Regional Officer, London Midland Region, British Railways, and a Vice-President of the Association.

Cambridge University Railway Club.—The winning entry in the annual photographic competition of the Cambridge University Railway Club was that depicting a narrow-gauge locomotive built by Hudswell Clarke & Co. Ltd. awaiting shipment at the West India Docks, London. The competition was judged by members of the staff of this journal and of our associated contemporary, *The Railway Magazine*. The winner Mr. D. J. Twibell, at a meeting of the club on November 29, was presented with the first prize, an oil painting by C. Hamilton Ellis of Cambridge Station in 1900, by Mr. Paul Drew of *The Railway Gazette*, who afterwards gave a short talk on "Some Aspects of International Passenger Traffic."

R.S.A. Annual Dinner & Dance.—The Annual Dinner & Dance of the Railway Students' Association was held at the London Transport (South Kensington) Club on November 28. A reception by Mr. C. K. Bird, President of the Association and

Chief Regional Officer, Eastern Region, British Railways, preceded the Dinner, at which the toast "The Ladies and Visitors," was proposed by Mr. Bird and replied to by Mr. B. W. C. Cooke, Editor, *The Railway Gazette*. Mr. D. H. Coombs, Chairman of the Committee of the Association, speaking on behalf of the members, thanked Mr. Bird for presiding. The dinner was followed by dancing and a social evening.

Presentation to Mr. T. D. Slattery.—The twenty-first Annual World Travel Congress recently held in Paris, and which was referred to in our issue of October 19, took place under the auspices of the American



Society of Travel Agents, and was attended by over 1,400 delegates from 38 countries. Mr. T. D. Slattery, North American Representative of British Railways, was elected Chairman of the Allied Membership for the fourth successive year, and to mark the occasion was the recipient of two bronze plaques. One of these, that shown in the photograph reproduced above, was from the Society itself, and the other was from the American travel writers of leading magazines in the U.S.A.

British Railways Coal and Steel Carrying.—During last weekend 396,390 tons of deep-mined and open-cast coal were cleared by British Railways, making a total for the week, 3,233,920 tons. The iron and steel figures for the week ended November 24 show that 197,543 tons were conveyed from the principal steelworks.

Locomotive Water from Fire Engines.—Failure of the engine of a Fenchurch Street to Southend passenger train near Laindon during the peak evening traffic period on December 3 caused delays to this, and to trains running close behind, of which the engines could have no access to the nearest water column. The length of the delays necessitated four locomotives being replenished by the local fire brigade, which pumped water into the engine tanks from the nearest supply point.

Export of Locomotives to India.—Six more 65-ton 0-6-2T engines have just been shipped to the Calcutta Port Commissioners for the 5-ft. 6-in. gauge lines along the Hooghly and to haul 1,200-ton trains of freight wagons. The cylinders of these engines are 16 in. by 24 in., the wheels 3 ft. 10 in. dia., the boiler pressure 210 lb. per sq. in., and the tractive effort 23,850 lb. This is the third order for six locomotives completed by the Hunslet Engine Co. Ltd. within the last few years.



Production of resistances and contactors for 3,030-h.p. electric locomotives to be supplied to the South African Railways, in the new traction control shop at Witton, of the General Electric Co. Ltd.

OFFICIAL NOTICES

NEW ZEALAND RAILWAYS

WE buy used or unserviceable Steel Files at good prices in lots of 2 cwt. or more.—THOS. W. WARD LTD., R.S. Dept., Albion Works, Sheffield.

BRITISH RAILWAYS (Western Region) London Office have vacancies for expert designers in Prestressed Concrete. Good prospects of permanency for conscientious and knowledgeable men. Apply, giving particulars of age, experience, etc., to CIVIL ENGINEER, BRITISH RAILWAYS, WESTERN REGION, Paddington Station.

COMPANY manufacturing diesel-electric locomotives invites applications for the following staff:—Designer Draughtsmen and Draughtsmen who are experienced in the electrical and mechanical design of D.C. Control Equipment. Good salaries paid to men with exceptional qualifications. Three years agreement and every facility to find suitable living accommodation will be given. Staff Assurance Scheme and good working conditions. Applications from men with industrial control gear experience will also be considered. Offers only to first class men. Please apply giving full details of training, experience, age, etc., to Box 295, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

INTERNATIONAL RAILWAY ASSOCIATIONS. Notes on the work of the various associations concerned with International traffic, principally on the European Continent. 2s. By post 2s. 2d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

Henschel & Sohn G.m.b.H., Kassel, has also recently delivered six locomotives to the same design.

Auckland Electrification Scheme.—It is announced that the New Zealand Cabinet has approved in principle plans for the electrification of Auckland suburban railways, and construction of an underground line.

Tourist Tickets in France.—The French National Railways have decided to continue the issue of tourist tickets with reductions in ordinary fares of 20 and 30 per cent. for return or circular journeys of at least 1,500 and 2,000 km., respectively, until March 1, 1953.

Winter Rail Transport Problems Discussed.—Last month Mr. H. A. Short, Chief Regional Officer, and Mr. E. W. Arkle, Commercial Superintendent, North Eastern Region, British Railways, met leading traders at Bradford, Hull, Leeds, Newcastle, and York to discuss winter rail transport problems.

London Midland Region Station Closing.—The following London Midland Region stations were closed for passengers, parcels, and passenger train merchandise as from December 3: Storeton (for Barnston) (between Neston & Parkgate and Birkenhead); Eastwood (between Todmorden and Sowerby Bridge); and Chester (Liverpool Road) between Chester (Northgate) and Blacon. The Bethesda branch from Bangor was closed on the same date and the following stations are affected: Bethesda, Tregarth, and Felin Hen Halt.

Institute of Transport, Metropolitan Section.—At a meeting of the Metropolitan Section of the Institute of Transport, on December 4, Mr. G. H. Searle, Honorary Treasurer, was elected a Vice-Chairman in place of Mr. W. H. Gaunt, whose death was recorded in our November 9 issue. Mr. A. R. Parselle, Member of the Committee, was elected Honorary Treasurer in place of Mr. Searle.

Classes for Scottish Region Stationmasters and Porters.—This winter, more than 300 stationmasters, porters, clerks and other

THERE are vacancies in the New Zealand Railways for the following technical staff:—Designers of points and crossings and similar track construction; Structural Engineers; Structural Draughtsmen; Architects and Architectural Draughtsmen; Civil Engineering Draughtsmen; Engineers' Assistants; Technical Assistants (men of good education and technical knowledge but inexperienced in draughting or surveying); Plant Engineers (experienced in plant used in Civil Engineer's Department of Railways. Plant includes sleeper treating and rail welding). Salary range £558-£759 (N.Z.) per annum according to age, qualifications and experience. Further particulars and application forms may be obtained on request from:—The High Commissioner for New Zealand, 415, Strand, London, W.C.2, mentioning this paper and quoting reference A3/36/19. Closing date December 31, 1951.

LEADING Railway Carriage Draughtsman required with general experience, especially of unit construction. Diesel railcar experience very desirable.—Apply Box 263, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

RAILWAY MAINTENANCE PROBLEMS. By H. A. Hull (late District Engineer, L.M.S.R.). Valuable information. With much sound advice upon the upkeep of permanent way. Cloth. 8½ in. by 5½ in. 82 pp. Diagrams. 5s. By post 5s. 3d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

grades of Scottish railwaymen are voluntarily attending evening classes or undertaking correspondence courses in their spare time to improve their knowledge of train signalling and railway operating regulations. At the classes, held in Glasgow and Edinburgh, are working models to enable the students to gain realistic experience.

Leopoldina Railway Co. Ltd.—An extraordinary general meeting of the Leopoldina Railway Co. Ltd. will be held at the Abercorn Rooms, Bishopsgate, London, E.C.2, on December 27, to consider a resolution authorising the voluntary winding up of the company.

Improvements at Dun Laoghaire.—A public address system is to be installed at Dun Laoghaire Pier, to the joint cost of Coras Iompair Eireann and British Railways. Final arrangements have still to be settled by the Signal & Electrical Department of C.I.E. but early plans include the erection of loudspeakers on both platforms and at the entrance gate.

English Electric Co. Ltd. Rights Issue.—A rights issue designed to raise a gross sum of £3,243,837 is to be made to ordinary stockholders of the English Electric Co. Ltd. They will be offered 1,179,577 ordinary £1 shares at 55s, a share in the proportion of two new shares for every £7 of ordinary stock held on November 17. The present issued capital of the company comprises £1,135,844 of 6½ per cent. cumulative preference stock, £1,500,000 of 3½ per cent. cumulative preference stock, and £4,128,520 of ordinary stock.

North Eastern Region Ambulance Awards.—At the B.T.C. Police Club at Leeds, on November 22, Mrs. H. A. Short, wife of the Chief Regional Officer, North Eastern Region, made presentations to 87 members of the Leeds district of the North Eastern Region Ambulance Movement of British Railways. Awards included two diplomas, five 15-year efficiency medals, two 20-year bars, one 30-year bar, 20 certificates, eleven vouchers, seven medallions, and 39 labels. Dr. L. Brill, of Leeds, associated with the movement for many years as lecturer and examiner, received a memento in appreciation of his services. The pre-

SENIOR DRAUGHTSMAN with good experience of railway and wharf work required by London consulting engineers. Salary by arrangement. Please give in confidence full particulars of training and experience and age to Box "NV/136," c/o 95, Bishopsgate, London, E.C.2.

JUNIOR TRAFFIC OFFICIALS with railway traffic apprenticeship experience. Age about 25, single, required for service on railways in Peru and Bolivia. Apply to the Secretary of the PERUVIAN CORPORATION LIMITED, 144, Leadenhall Street, London, E.C.3.

RAILWAY ROLLING STOCK DRAUGHTSMAN required by London firm of consulting engineers. Candidates should be experienced in the design and specification of railway carriages and wagons for Overseas Railways and in the administration of contracts for their supply. Salary by arrangement. Pension scheme. Five-day week. Please write (in confidence) full particulars of training and experience, age, etc., to Box DE/2, c/o 95, Bishopsgate, E.C.2.

THE "PAGET" LOCOMOTIVE. Hitherto unpublished details of Sir Cecil Paget's heroic experiments. Eight single-acting cylinders with rotary valves. An application of the principles of the Willans central-valve engine to the steam locomotive. By James Clayton, M.B.E., M.I.Mech.E. Reprinted from *The Railway Gazette*, November 2, 1945. Price 2s. Post free 2s. 3d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

sentations were made during an interval in a musical evening arranged for members and relatives and friends. Among those present, in addition to Mr. and Mrs. Short, were Messrs. E. W. Arkle, Commercial Superintendent; A. Dean, Civil Engineer; H. S. Cole, Chief of Police, Northern Area; Mrs. Cole; Messrs. T. W. Polding, District Passenger Superintendent; and T. R. Heaton, District Goods Superintendent, Leeds. Mr. W. J. Thomas, Stationmaster, Harrogate, was Chairman.

International Sleeping Car Share Trust Limited.—The directors of the International Sleeping Car Share Trust Limited state that there is reason to hope that early in 1952 the position relative to the holding of missing Wagon-Lits shares will have been satisfactorily settled and that this will be followed by the receipt of the withheld dividends declared by the Wagon-Lits Company. The annual general meeting will be held in London on December 21.

Upkeep of Disused County Down Lines.—In answer to a question recently asked in the Ulster Senate on the maintenance of disused sections of the Belfast & County Down Railway, it was stated that the Ulster Transport Authority had applied for an Order for abandonment of the lines, but the grant of the Order had been deferred until the report of the Transport Tribunal on the special inquiry was available. The point was put that many sleepers and fencings were being removed wantonly, and that if deterioration continued and it was decided to reopen part of the line the cost would be prohibitive.

Nitrate Railways Co. Ltd.—Mr. P. L. Fleming, Chairman, in his statement issued with the report of the Nitrate Railways Co. Ltd. for the year ended December 30, 1950, points out that after repayment of £3 a share, made in February last, the company was left with cash and investments which were, on present values, equivalent to about 20s. a share. The company would have liked to repay the bulk of this now, leaving the balance to be distributed at the same time as anything they received from Chile, but they were advised that no further amounts could legally be distributed except by a liquidator. It was also found impracticable to put the company into liquida-

tion until they were nearer solution of closing problems and settlement of final disputes in which they were still involved in Chile.

L.M.R. Orchestral Society.—The London Midland Region (London) Orchestral Society will give a concert at 7.15 p.m. on Friday, December 14, in the Large Hall, Friends House, Euston Road, N.W.1. The soloists will be Pauline Elmitt (violin) and Mavis Elmitt (pianoforte).

Forthcoming Meetings

December 7 (Fri.).—Scottish Society of Students of the Locomotive, at the Board Room, 302, Buchanan Street, Glasgow, at 7.30 p.m. "The Gresley Valve Gear," by Mr. G. W. Phillips.

December 10 (Mon.).—Institute of Transport, at the Jarvis Hall (R.I.B.A.), 66, Portland Place, W.1, at 5.45 p.m. Henry Spurrier Memorial Lecture, "The Pattern of the Oil Industry," by Mr. C. T. Brunner.

December 11 (Tue.).—Permanent Way Institution, Sheffield Section, at the Royal Victoria Hotel, Sheffield, at 6.45 p.m. "A Few Commercial Aspects of Rail Transport," by Mr. E. G. Armytage.

December 11 (Tue.).—Permanent Way Institution, Leeds Section, at the Leeds Church Institute, Albion Place, Leeds, 1, at 7 p.m. Annual general meeting, followed by a Brains Trust.

December 11 (Tue.).—British Railways, Southern Region, Lecture & Debating Society, at the Chapter House, St. Thomas' Street, S.E.1, at 5.45 p.m. "Transport and its Effect on the Distribution of Population," by Mr. F. J. Wymer, Assistant Chief Regional Officer.

December 11 (Tue.).—Institution of Civil Engineers, Great George Street, Westminster, S.W.1, at 5.30 p.m. "The Construction of Kafr el Zayat Railway Bridge," by Mr. K. E. Hyatt and Mr. G. W. Morley.

December 12 (Wed.).—Permanent Way Institution, London Section, at the Railway Executive, 222, Marylebone Road, N.W.1, at 6.30 p.m. "The American Railway Engineering Association, its Organisation, Work and Accomplishments," by Mr. C. E. R. Sherrington.

December 12 (Wed.).—South Wales & Monmouthshire Railways & Docks Lecture & Debating Society, at the Angel Hotel, Westgate Street, Cardiff, at 6.30 p.m. "The Relationship of Management and Labour in the Transport Industry," by Mr. W. P. Allen, Member, Railway Executive.

December 13 (Thu.).—Diesel Engine Users' Association, at Caxton Hall, Westminster, S.W.1, at 2.30 p.m. "Report on Heavy-Oil Engine Working Costs 1949-50."

December 13 (Thu.).—Irish Railway Record Society, Exhibition of British Railways Films.

December 13 (Thu.).—Institution of Electrical Engineers, Savoy Place, W.C.2, at 5.30 p.m. "The Characteristics & Control of Rectifier-Motor Variable-Speed Drives," by Mr. P. Bingley.

December 13 (Thu.).—British Railways, Western Region, London Lecture & Debating Society in the Clerks' Dining Club, Bishops Bridge Road, W.2, at 5.45 p.m. "Railway Quiz": Question Master Mr. H. G. Bowles, Assistant Chief Regional Officer.

Railway Stock Market

Again uncertainty has prevailed in stock markets, where British Funds failed to hold an earlier improvement, and values in most other sections were inclined to recede in the absence of demand. There has been a certain amount of selling of existing securities to provide money to take up new shares and debentures offered on attractive terms and there are rumours that more important new issues are being planned. The recent outcome of the Lever & Unilever issue has demonstrated that investors prefer ordinary shares to debentures at the present time. This is because of uncertainty as to the more immediate outlook for British Funds. Nevertheless, there is a growing view that if there is no further increase in the Bank rate in the near future, these are likely to rally. War Loan 3½ per cent. and Consols 4 per cent. are at levels which offer yields of fully 4½ per cent. and these appear attractive compared with the yields on many industrial shares. It is hardly surprising that many brokers are continuing to take the view that either British Funds are now too low in price or many industrial shares too high. A factor which has helped to depress gilt-edged stocks is the knowledge that a further issue of Coal stock for compensation purposes is about to be made.

There has been only moderate interest in foreign rails, though Leopoldina remained active, now that Brazil has agreed to release the compensation money. The 4 per cent. debentures improved to 101½ because their total compensation is expected to be £104; but the 6½ per cent. debentures at £150½ reflected a little profit-taking by those who purchased well below the current level, though the total compensation for this stock is expected to be £157. The ordinary and preference were more active around 11 and 28½, with some speculative buying of the preference on the view that, including possible "sweepings," the total compensation for this stock may be slightly over 28½. Leopoldina Terminal 5 per cent. debentures were good at 104 with the ordinary units at 1s. 7½d.

Canadian Pacific moved closely with Wall Street, but later firmed up to 567½ in response to market expectations of an increase in the forthcoming dividend. Canadian Pacific 4 per cent. debentures were 83½, and the 4 per cent. preference 68½, at which the latter offers a generous

yield, even allowing for the fact that this preference stock is non-cumulative as to dividend. White Pass Yukon 4½ per cent. debentures were 528½ and the convertible debentures 530½.

Antofagasta stocks were active but uncertain with the ordinary at 17½ and the preference at 73. Brazil Rail bonds were 5½ and San Paulo 10s. units recovered to 15s. 3d. after being down to close on 14s. 6d. Manila "A" debentures were 76 and the preference shares 8s. Mexican Central "A" bonds fell back sharply to 86. After publication of the annual statement Nitrate Rails receded to 24s. 6d. Taltal were 19s. After a further reaction, United of Havana stocks strengthened, and the 1906 debentures were 18½, awaiting further news from Havana. Road transport shares kept generally steady, with South-down at 96s., West Riding 44s. 6d., Lancashire Transport 53s. 9d., and B.E.T. deferred stock £460.

Engineering and kindred shares have been more active, but showed no very definite trend. It is generally assumed that E.P.T. will prevent higher dividends in most cases, but that on the other hand, rearmament work should enable net profits and dividends to be maintained; on this basis yields are quite attractive at current prices. Guest Keen and also Vickers have been attracting more attention, because of the satisfactory yields, and also John Brown, though best levels were not held, and B.S.A. eased to 39s. 3d. The view is that the prospect of denationalisation of steel means that both Vickers and Cammell Laird will not lose their important English Steel interests. This will mean that talk of a possible return of some kind for shareholders from nationalisation compensation will not materialise. Nevertheless it was by no means certain that there would be a special return for shareholders because compensation for English Steel would no doubt have been used by the companies to acquire new interests or to provide additional finance needed for rearmament and allied work.

Shares of locomotive builders and engineers were again fairly steady and sentiment was helped in some cases by news of further important overseas contracts. Hurst Nelson were 58s. 9d. at Glasgow, Birmingham Carriage 37s. 9d., Vulcan Foundry 25s. 6d., North British Locomotive 18s. 4½d., Gloucester Wagon 14s. 6d., Beyer Peacock 32s. 4½d., Wagon Repairs 11s. 9d., and Charles Roberts 25s.

Traffic Table of Overseas and Foreign Railways

	Railway	Miles open	Week ended	Traffics for week		No. of week	Aggregate traffics to date	
				Total this year	Inc. or dec. compared with 1949/50		Total	Increase or decrease
							1950/51	
Canada South & Cen. America	Antofagasta ...	811	23.11.51	£ 147,340	+ £ 43,690	47	£ 5,777,840	+ £ 2,599,066
	Costa Rica ...	281	Oct., 1951	c1,244,055	+ c228,863	18	c4,947,302	+ c586,239
	Dorada ...	70	Oct., 1951	36,894	515	43	361,117	30,116
	Inter. Ctl. Amer. ...	794	Sep., 1951	\$923,671	— \$76,767	39	\$9,945,698	— \$281,585
	Paraguay Cent. ...	274	23.11.51	\$361,195	+ \$124,733	21	\$6,996,189	+ \$72,865,200
	Peru Corp. ...	1,050	Oct., 1951	\$8,381,000	+ \$622,000	18	\$32,898,000	+ \$1,692,000
	" (Bolivian Section)	66	Oct., 1951	Bs.18,324,000	+ Bs.5,859,000	18	Bs.59,719,000	+ Bs.16,745,000
	Salvador ...	100	Sep., 1951	c15,000	+ c40,000	13	c381,000	+ c113,000
	Taltal ...	147	Oct., 1951	\$1,639,000	+ \$317,000	18	\$7,943,000	+ \$2,142,700
	Canadian National†	23,473	Oct., 1951	18,728,000	+ 664,000	43	172,143,000	+ 21,892,000
Canadian Pacific†	17,037	Oct., 1951	13,467,000	+ 1,218,000	43	1,218,000	+ 15,250,000	
Various	Barsi Light* ...	167	Oct., 1951	31,312	+ 7,657	29	243,592	+ 42,060
	Egyptian Delta ...	607	10.4.51	17,513	267	4	17,513	267
	Gold Coast ...	536	Aug., 1951	220,509	+ 16,972	21	1,280,126	+ 109,832
	Mid. of W. Australia	277	Sep., 1951	62,508	+ 23,733	13	169,894	+ 59,039
	South Africa ...	13,398	27.10.51	1,919,368	+ 219,340	30	56,852,532	+ 6,817,681
	Victoria ...	4,744	Aug., 1951	1,931,917	+ 45,412	9	—	—

* Receipts are calculated at 1s. 6d. to the rupee

† Calculated at \$3 to £1